

COMMITTEE HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)	
)	
Revisions to the California)	
Building Energy Efficiency)	Docket No.
Standards)	05-BSTD-1
)	
Cool Roof Coatings Performance)	
Requirements)	
_____)	

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

TUESDAY, JUNE 7, 2005

10:06 A.M.

Reported by:
Peter Petty
Contract No. 150-04-002

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMISSIONERS PRESENT

Jackalyne Pfannenstiel, Presiding Member

Arthur Rosenfeld, Associate Member

STAFF and CONTRACTORS PRESENT

Elaine Hebert

G. William Pennington

ALSO PRESENT

Bill Kirn

National Coatings Corporation

Joseph W. Mellott

Momentum Technologies, Inc.

Reed B. Hitchcock

Roof Coatings Manufacturers Association

Paul A. Beemer

Henry Company

Stanley Pepper

Greenproducts

Grant Grable

Greenproducts

Chris Fisher

Uni-Glaze

Chris Salazar

Karnak Corporation

Dan Varvais

Applied Polymer Systems

Craig Smith

Superior Products International

Craig Lease

L&L Suppliers, Incorporated

ALSO PRESENT

Hashem Akbari
Lawrence Berkeley National Laboratory

Matthew Pickett
GAF Materials Corporation

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1 P R O C E E D I N G S

2 10:06 a.m.

3 PRESIDING MEMBER PFANNENSTIEL: I'm
4 Commissioner Jackie Pfannenstiel, the Presiding
5 Member of the Commission's Energy Efficiency
6 Committee. And to my left is Commissioner Art
7 Rosenfeld, the other member of the Committee.

8 So welcome to the Energy Efficiency
9 Committee hearing on the roof coatings rulemaking.
10 We're proposing here to make some changes to
11 section 118(i)3 to the 2005 building energy
12 efficiency standards that take effect October 1,
13 2005.

14 The proposed action results from a
15 petition for rulemaking that was filed with the
16 Commission on April 4th, and a letter received
17 March 17th. The petitioners are a consortium of
18 23 manufacturers led by the National Coatings
19 Corporation.

20 The letter was from the Roof Coatings
21 Manufacturers Association, a trade association
22 based in Washington, D.C.

23 The proposed changes are to the physical
24 performance requirements for liquid-applied cool
25 roof coatings. These requirements include minimum

1 elongation requirements at low temperature. The
2 petitioners wish to add an alternative to
3 elongation.

4 In addition, today's hearing will
5 include taking comments on minimum dry mil
6 thickness requirements for liquid-applied cool
7 roof coatings and other related issues brought to
8 our attention.

9 I'm now going to turn it over to Elaine
10 Hebert who will lead the discussion.

11 MS. HEBERT: Good morning, thank you,
12 Commissioner. I'm Elaine Hebert from the Energy
13 Commission. And to my left here is Bill
14 Pennington.

15 As a little bit of background I want to
16 inform you that we went through a public process
17 for the 2005 standards that took about three
18 years. We held something like 20 or 25 public
19 meetings. And we made our best attempts to reach
20 the industries affected to obtain their input.
21 Thus the existing language for the 2005 cool roof
22 regulations was based on the input we received.

23 The second point I'd like to make. Even
24 if we come to agreement today any changes to the
25 2005 standards will not become effective prior to

1 October 1st. We sketched out the schedule. The
2 best we could do with all the filings we need to
3 do, and the time allowed for each, the best we can
4 do is probably end up with effective date of the
5 end of October. And if anything slips it would
6 probably slip something like two months.

7 If we make changes other than the
8 proposed, what we call express terms, what's
9 before us today, we will allow an extra 15 days at
10 least for the public to review the changes that
11 will come out of this meeting today. And the
12 public will have a chance to comment before the
13 Energy Commission adopts at a formal business
14 meeting. And you'll be able to comment up to that
15 business meeting, though we'd much prefer that
16 your comments come to us before that and not at
17 the last minute.

18 A little more background. The intent of
19 section 118(i)3 and table 118-C in that section is
20 that liquid-applied coatings meet physical
21 performance requirements to insure that the
22 coatings will be durable under a range of
23 California conditions and climates; and thereby,
24 will reliably achieve the energy savings expected
25 by the 2005 standards.

1 And note that our energy savings
2 calculations, over time, include some degradation
3 of the roof's surface from dirt accumulation.

4 I've prepared an agenda for today which
5 is out there on the table along with the other
6 handouts. We have three hours for this meeting
7 today, and I didn't dare set a time for each of
8 these topics. But what I have in mind is that
9 topic 3a, which is regarding table 118-C, we would
10 give an hour and a half to.

11 The second item, 3b, we would give an
12 hour. And give a half hour for everything else.
13 And we'll just kind of play it by ear and see if
14 that works.

15 There is a chance that if the
16 discussions can't be wrapped up in three hours,
17 that we would set another meeting time.

18 We're going to use a technique for your
19 comments that we commonly use for public hearings.
20 That's the blue comment card method. There are
21 blue comment cards out on the table in the
22 entryway there. Please fill in your name and
23 which topic of the three you wish to address, or
24 if there's an other, let us know that. And we
25 will organize the comments according to what you

1 put on the cards.

2 If you want to speak on more than one
3 topic, please fill out more than one card. One
4 card per topic.

5 Bring the cards to me. I will bring
6 them up to Commissioner Pfannenstiel. And she'll
7 lead that part of the discussion.

8 We ask that you be succinct in your
9 comments since we're under a time crunch. If
10 you've provided us written comments already,
11 please don't read them word-for-word. Try and
12 summarize. And please also stay on the subject
13 matter.

14 We are being recorded today, and there
15 will be a transcript that will be released in a
16 few weeks. And that will be posted to the project
17 website.

18 We are also being broadcast over the
19 internet so it is essential that if you have
20 comments today that you come to one of the
21 microphones and that the microphone is on. And I
22 think that those there are not on yet, so we'll
23 make sure that they are when you come to speak.

24 I've already mentioned that there are
25 documents out there, backup documents, on the

1 table. Some of them are on the website already,
2 and some of them arrived too late to be on the
3 website. We'll get them on the web as soon as we
4 can.

5 Please turn cellphones off, or to silent
6 or vibration mode. If you haven't found the
7 restrooms yet, there are some right out there.
8 Probably you found the coffee shop already on the
9 second floor if you need a break.

10 So I think we'll turn it back over to
11 Commissioner Pfannenstiel. And I believe we're
12 going to begin with the petitioners. And any blue
13 cards, please come to me and I will bring them up
14 to the Commissioner.

15 PRESIDING MEMBER PFANNENSTIEL: Thank
16 you, Elaine. I guess we will begin with the
17 petitioners, the RCMA. And who is here to speak
18 from that --

19 MR. PENNINGTON: It's National Coatings,
20 that's the petitioner.

21 PRESIDING MEMBER PFANNENSTIEL: That's
22 fine. And who is going to be speaking?

23 MR. PENNINGTON: National Coatings
24 first.

25 MS. HUNTER: Bill, you can be here or

1 you can be up there. And please identify
2 yourself.

3 MR. KIRN: Thank you, Commissioner, for
4 the opportunity to speak to you. Mr. Rosenfeld, I
5 haven't seen you in several years, so it's good to
6 see you again. I'm glad you're still active in
7 this.

8 My name is Bill Kirn; I'm the Technical
9 Director of National Coatings Corporation. I'm
10 here speaking on behalf of 23 companies who have
11 signed a letter dated March 28th, addressed to
12 you.

13 A little bit about myself. I'm the
14 Technical Director of National Coatings
15 Corporation; I'm a registered roof consultant; on
16 the Board of Directors of the Cool Roof Rating
17 Council; I'm the Chairman of the Technical
18 Committee of the Cool Roof Rating Council.

19 Our request to you today involves an
20 amendment or an addition to a table 118-C, where
21 low-temperature mechanical properties are listed,
22 both before and after accelerated weathering.

23 What we propose would be an or-equal
24 test called low-temperature flexibility, where a
25 coating is applied to a piece of sheet metal and

1 bent over a mandril, bent over a rod at low
2 temperature. And this test would be done before
3 and after weatherometer.

4 A little background about table 118-C,
5 and maybe how it came to be, as I understand it.
6 Table 118-C follows closely an ASTM specification
7 for acrylic roof coatings called ASTM D6083. This
8 was developed in 1997. I, at the time, was the
9 chairman of the task group that developed that
10 specification. So I can speak with a lot of
11 expertise about how it came to be, and why the
12 numbers and why the methods are as they are.

13 One of the important things about the
14 ASTM spec was that it was to provide minimum
15 performance requirements for a roof coating that
16 could be applied throughout the country. So, a
17 coating that would tolerate the expansion and
18 contraction at low temperature in Duluth,
19 Minnesota, as well as the hot climates of Florida.

20 There were issues about could we have
21 like a temperate product for less stringent
22 environments, and one for more stringent
23 environments when it came to low-temperature
24 properties. And it was the agreement of the task
25 group, and ultimately what came to be was a sort

1 of one-size-fits-all that would span the climatic
2 conditions that exist in this country.

3 So you will see that there's just the
4 one set of criteria. And the criteria that D6083
5 does contain a low-temperature flexibility test.
6 We considered low-temperature mechanical
7 properties, and felt as though low-temperature
8 flexibility was an easier test to run; it was more
9 consistent; and represented what would happen to
10 that coating. That coating would be applied to
11 something else, and it would be caused to expand
12 and contract versus just a free film of the
13 coating, as though it was a loose-laid membrane or
14 something.

15 What we are requesting is that ASTM D522
16 be included as an or-equal. This is a low-
17 temperature flexibility test. And the test can be
18 conducted before and after accelerated weathering.

19 There are benefits for this, and let me
20 briefly outline those to you. Low-temperature
21 flexibility is an easier test to run in a
22 laboratory environment than mechanical properties.
23 It's a lower cost test to run, so there's benefits
24 for the manufacturer that's doing it. It still
25 gives almost the same data and the same results

1 that you get with the low-temperature mechanical
2 property test. But, again, it's a bit more
3 expedient.

4 It's also a better proxy for what
5 happens in the real world, because these coatings
6 are not sort of cast and then laid as free films
7 on that roof. They're painted on, if you will,
8 onto that roof. So they will then be required to
9 expand and contract with that roofing substrate,
10 whether it be asphalt, buildup roofing, cap sheet,
11 single ply, sprayed foam, metal. In no case would
12 the coating sort of be free floating.

13 So, again, the idea of applying the
14 coating to a test substrate makes a lot more sense
15 from the standpoint of real world practical
16 applications.

17 There's benefits also, I'd like to
18 comment on, for the end user, for the State of
19 California, for the building owner. And these are
20 first that this kind of inclusion will allow a
21 broader range of products to be listed. So it
22 will allow market forces to come into play which
23 will provide the best price for the building owner
24 in terms of getting a cool roof, if you will.

25 The change won't require higher cost

1 products that are designed for colder climates.
2 Again, with a more temperate climate here in
3 California, the requirements for low-temperature
4 flexibility won't be as great as they would be if
5 we were selling a product that was going to be
6 used, or specified, or there would be some
7 legislation written around somewhere in Chicago or
8 Minnesota.

9 So this concludes my comments on behalf
10 of our petition, and we wait to hear from you.
11 Thank you.

12 PRESIDING MEMBER PFANNENSTIEL: Thank
13 you. Commissioner Rosenfeld, do you have any
14 questions?

15 COMMISSIONER ROSENFELD: I'm glad to see
16 you again.

17 MR. KIRN: Absolutely.

18 PRESIDING MEMBER PFANNENSTIEL: Thank
19 you very much. Mr. Pennington.

20 MR. PENNINGTON: Yes, thank you. I have
21 a couple questions. You're basically, I think,
22 arguing in the petition that products that pass
23 the flexibility test would perform completely
24 satisfactorily throughout the climates in
25 California, even if that product didn't pass the

1 elongation test?

2 MR. KIRN: Yes, that's correct.

3 MR. PENNINGTON: And I was wondering if
4 you have any evidence that that is the case?

5 MR. KIRN: I'm sure we have an inventory
6 of roofs that we can provide for you in colder
7 climates. The one problem with getting some of
8 these kind of proof statements, if you will,
9 actual roofs that have been done, is that as we
10 get into colder climates in California there's
11 less and less low-slope roofing.

12 So we may not have the kind of exact
13 environment and roofing situation that would
14 exemplify what you're asking for. Typically as
15 you get into the colder climates, it seems like
16 it's less populated, there's more steep-slope
17 roofing, so again less use for these kinds of
18 coatings.

19 Now we certainly have this information
20 in other similar climatic areas outside of
21 California that we could provide if that would
22 be --

23 MR. PENNINGTON: Perhaps that would be
24 satisfactory, if there's climates that are similar
25 to California's coldest climates, that you have

1 some evidence that products that pass the
2 flexibility test, but didn't pass the -- maybe
3 parenthetically, but didn't pass the elongation
4 test, if they succeeded satisfactorily, with a
5 satisfactory life in those climates, then I think
6 that would be evidence that the flexibility test
7 is a reasonable alternate.

8 MR. KIRN: Okay. Yes, we can certainly
9 provide that for you.

10 PRESIDING MEMBER PFANNENSTIEL: Thank
11 you, Mr. Kirn.

12 MR. KIRN: Thank you.

13 PRESIDING MEMBER PFANNENSTIEL: And I
14 think next we would ask the Roof Coatings
15 Manufacturers Association.

16 MR. PENNINGTON: You can use the podium
17 or you can sit there, either one, whatever your
18 choice is.

19 MR. MELLOTT: I will be reading a
20 summary that was developed --

21 MS. HEBERT: Please identify yourself.

22 MR. MELLOTT: I'm sorry. I'm Joe
23 Mellott from Momentum Technologies. I'm Vice
24 President of Technologies for Momentum
25 Technologies. We are an Ohio-based CRRC-approved

1 laboratory services company.

2 I will be presenting testimony on behalf
3 of the Roof Coatings Manufacturers Association.
4 We appreciate the Commission's opening in this
5 rulemaking proceeding, and the opportunity to
6 present our views. With me is Reed Hitchcock,
7 Executive Director of the RCMA.

8 The Roof Coatings Manufacturers
9 Association is a 23-year old organization
10 representing manufacturing a broad range of
11 liquid-applied roof coating products, including
12 those produced and sold in the State of
13 California.

14 Our diverse membership allows us to
15 provide a wide range of information for a variety
16 of quality products without bias to any single
17 product category.

18 We're here today to discuss our concerns
19 with the performance criteria listed for liquid-
20 applied roof coatings under title 24, part 6,
21 section 118(i)3.

22 As the record indicates we submitted
23 written comments related specifically to title 24,
24 part 6, section 118(i)3 on March 8, 2005, and
25 again on May 17, 2005.

1 Under normal circumstances we'd expect
2 that appropriate state and local building codes
3 would insure adequate performance of building
4 materials, as opposed to having to be addressed in
5 an energy code.

6 We believe that the language set forth
7 in the proposed changes, as identified in the
8 express terms documented to the 2005 building
9 energy efficiency standard title 24, part 6,
10 section 118(i)3, made great strides toward opening
11 the market to some additional products. However,
12 there are many more products which are simply not
13 addressed in the code.

14 Our primary concerns are threefold.
15 That the regulation inhibits the use of proven
16 products which could otherwise be used if the
17 whole building performance method were employed as
18 a means to comply with title 24.

19 Two, that the regulation has the effect
20 of banning products that meet reflectivity,
21 emissivity and performance standards, and also
22 have a long history of exemplary performance in
23 the field.

24 And, three, that the regulation, because
25 it mandates performance criteria that are not

1 standard to our industry, may cause a tilt in the
2 marketplace which could result, at the very least,
3 in a short- to mid-term shortage of compliant
4 products available, as well as a potential
5 increase in cost to the consumer as a result.

6 We understand the Commission's
7 justification for including the performance
8 criteria listed in table 118-C, but feel compelled
9 to point out that this body has not seen fit to
10 include similar performance criteria for other
11 elements of the building envelope.

12 It is our view that the inclusion of the
13 current performance criteria in the energy code
14 amounts unwittingly to the denial of a market
15 access for many performing products that meet or
16 exceed the goals of title 24.

17 However, we appreciate that we are very
18 late in the terms of a change of this magnitude to
19 the 2005 code, and therefore seek to include
20 proven standards in the document which will allow
21 the choice, sale and use of performing materials.

22 In our letter dated May 17, 2005, we
23 outlined to the Commission the following proposal
24 for additional language to include recognized ASTM
25 standards for testing roof coatings which will

1 allow our members to produce and market products
2 that meet energy goals while complying with well-
3 established performance criteria that has guided
4 our industry for many years.

5 Specifically we are requesting that
6 section 118(i)3 be amended as follows: Under
7 section 3, liquid-apply roof coatings applied in
8 the field as a top surface of roof covering shall
9 meet the requirements of table 118-C or meet the
10 requirements of ASTM C836, C957, D1227, D3468,
11 D4586, D6083, or D6694.

12 Except --

13 PRESIDING MEMBER PFANNENSTIEL: I can
14 see why you decided to read this rather than
15 trying to do it from memory.

16 MR. MELLOTT: I can do it by memory, but
17 it would be less exciting, I guess.

18 (Laughter.)

19 MR. MELLOTT: Exception 1 to section
20 118(i)3, aluminum pigmented asphalt roof coating
21 shall meet the requirements of ASTM D2824 or ASTM
22 D6848, and be installed as specified by ASTM
23 D3805.

24 Just a comment on exception 2. We would
25 just like the Commission to review the information

1 in the section. The ASTM procedure listed ASTM
2 D822 refers to carbon art method used to test
3 paints and related coatings. Please assure that
4 this is the desire method.

5 Exception 3 to section 118(i)3. Liquid-
6 applied roof coatings that do not comply with the
7 requirements in table 118-C or the listed ASTM
8 standards must obtain an ICCES evaluation report
9 indicating compliance with ICCES AC75, table 9, or
10 comply with applicable international building code
11 for IBC section 150.15. Did I read that right?
12 1507.15.

13 Inclusion of these additional well known
14 and established standards and procedures will
15 provide for the use of a variety of established
16 quality roof coatings, which will in turn maximize
17 choice for the general public in the diverse
18 environmental climates in California.

19 In relation to development of the 2008
20 code, the Roof Coatings Manufacturers Association
21 plans to become actively involved. Regrettably we
22 were not made aware of the process taking place
23 leading up to the development of the requirements
24 for 2005. And specifically table 118-C.

25 In order to provide the best technical

1 and marketing professionals to participate in this
2 development activity we would like to have
3 clarification on the following questions:

4 One, how is the task group or advisory
5 group structured? Two, who is involved in the
6 2005 group? Three, how are the individuals
7 selected to serve in this group? Four, are there
8 documented records of the discussions of this
9 group with the Commission?

10 We're committed to taking an active role
11 in the development process for the 2008 revision
12 to title 24. We intend to provide long-term
13 durability and performance data compiled by the
14 RCMA and appreciate the opportunity to fully
15 participate in the process.

16 Thank you very much for your time. We'd
17 be pleased to answer any questions from the panel.

18 PRESIDING MEMBER PFANNENSTIEL: Thank
19 you, Mr. Mellott. You asked some very specific
20 questions. Were you expecting responses now or at
21 some -- how did you -- were thinking of
22 proceeding?

23 MR. MELLOTT: No. At some point we
24 would like to know how that advisory panel is
25 being established, and how that's meeting, and how

1 frequently that's meeting. That does not have to
2 be answered today.

3 PRESIDING MEMBER PFANNENSTIEL: Well,
4 let me just ask, Elaine or Bill, is that something
5 you would comment on now, or would you rather
6 provide that -- I think it's reasonable questions
7 that we probably would like to discuss.

8 MR. PENNINGTON: Yes, I mean he's
9 talking about the whole set of meetings that we
10 would have for the 2008 standards, I think. And
11 we've yet to lay out a whole schedule for that at
12 this point.

13 MR. MELLOTT: Do you have any comments
14 about what the structure was in the past, and how
15 that was organized in the past?

16 MR. PENNINGTON: Yeah. We had one of
17 our contractors was researching this area. And
18 that contractor contacted several people in the
19 industry. And the proposal was drafted and made
20 public.

21 And then we had public meetings on it,
22 public workshop. There were -- this came up, I
23 guess, at two public workshops I can recall. And
24 then there were four public hearings on it. So we
25 had several public meetings to review that work.

1 MR. MELLOTT: Is this an open discussion
2 at this point?

3 PRESIDING MEMBER PFANNENSTIEL: I think
4 that we probably don't need to pursue all of this
5 right now. But I would suggest that you and Mr.
6 Pennington continue to discuss the subject.
7 Because clearly this is what we all need for the
8 next round of standards. We need to make sure
9 that we are inclusive in terms of participants in
10 that, designing those standards.

11 So we welcome your participation and in
12 terms of the structure I suggest that you talk
13 with Ms. Hebert and Mr. Pennington offline on
14 that.

15 MR. MELLOTT: As a point of
16 clarification, listening to Mr. Kirn in his
17 petition earlier. If we do move towards accepting
18 the flexibility standard as an or category to the
19 temp elongation we are nearly then accepting ASTM
20 D6083 except for the low-temperature tensile
21 number. Am I correct in that assumption?

22 MR. PENNINGTON: The requirements
23 wouldn't be quite as stringent, that's the only
24 thing, for what is proposed in table 118-C versus
25 the D6083. And there may be --

1 MR. MELLOTT: There are other --

2 MR. PENNINGTON: There are other tests
3 in 6083 --

4 MR. MELLOTT: -- portions of 6083 that
5 make actually adopting 6093 as an or a more
6 stringent approach to gaining access to the
7 California market.

8 The question, I believe at the RCMA
9 after all of this volumes of information, comes
10 down to is that we have a nationally recognized
11 ASTM standard that covers a nation that has a much
12 diverse environmental climate than even
13 California.

14 We were just under the impression that
15 that was a good standard and a balanced standard
16 for evaluating products. The departure to the
17 table listed in 118-C, we have not yet seen any
18 information or data presented that would indicate
19 that this would give California a better product.
20 Is there data available from the Energy Commission
21 that would suggest that by moving to a different
22 elongation standard at cold temperature or
23 different tensile standard at cold temperature
24 that that will provide an improved coating for
25 California specifically? Is there data that

1 supports that?

2 MR. PENNINGTON: Maybe a little history;
3 I'm going to cover a little background if I can.

4 The 2001 standards adopted D6083 as the
5 basic standard. And comments that we received
6 about that adoption was that there needed to be
7 wider flexibility and, you know, that standard is
8 particularly specified for a particular coating
9 type.

10 And so the comment that we got was that,
11 you know, you need to draw these performance
12 requirements in a broader way so that more types
13 of coatings can be applicable.

14 So that was the genesis of 118-C. And,
15 as I say, our contractor that worked on this work
16 developed 118-C sort of viewing 6083 as the
17 parent, if you will, of these requirements, but
18 trying to broaden them so a broad range of
19 coatings that would logically meet the cool roof
20 requirements would have a way of demonstrating
21 compliance with the standard.

22 So that was the origin of these
23 requirements. We went to available ASTM
24 procedures that are truly performance standards
25 and not just product component mix kinds of

1 specifications. But they're performance
2 requirements, performance standards that measure
3 the performance of the products, which is
4 different than some of the things that you're
5 recommending.

6 So we tried to draw this table of
7 performance specifications that would be widely
8 applicable to coatings.

9 The comment that we're getting back is
10 that in 6083 there was a flexibility requirement
11 rather than an elongation requirement. And that
12 flexibility requirement reaches the Commission's
13 intent, but is more widely used, and is
14 potentially less costly to administer. And so
15 that's the basis of that proposal.

16 MR. MELLOTT: If we fall back to that,
17 however, aren't we then just falling back to 6083
18 less the additional requirements such as fungi
19 resistance, water swell? You'll actually be --
20 because you will remove -- if you remove the low-
21 temperature elongation performance will you then
22 be removing the low-temperature tensile
23 performance?

24 MR. PENNINGTON: There's a proposal for
25 what we are changing that is available, the

1 express terms. And the only thing that is being
2 done is to add the flexibility test as alternate
3 to the elongation test --

4 MR. MELLOTT: Will you then require --

5 MR. PENNINGTON: -- at both temperature
6 conditions. I'm sorry, I said it wrong. At zero
7 degrees, and then after weathering for 1000 hours
8 at zero degrees.

9 MR. MELLOTT: Will you then remove the
10 tensile portion, or it will just be --

11 MR. PENNINGTON: No, the tensile portion
12 would remain.

13 MR. MELLOTT: So you will be required to
14 run a cold temperature tensile after aging?

15 MR. PENNINGTON: The rest of the
16 proposal is not proposed to be changed.

17 MR. MELLOTT: So then that would --

18 MR. PENNINGTON: I'm sorry, the rest of
19 the existing table is not proposed to be changed.

20 MR. MELLOTT: So that would not then
21 answer to the petition based on the request that
22 the equipment necessary to run low-temperature
23 elongation would be cost prohibitive? I'm just
24 trying to get a --

25 MR. PENNINGTON: Do you want to comment

1 on that?

2 MR. KIRN: Yeah, let me start out by
3 saying that the -- what we're proposing is an
4 alternative test to the low-temperature mechanical
5 properties.

6 MR. MELLOTT: Okay, to both the tensile
7 and the elongation, then?

8 MR. KIRN: Yeah.

9 MR. MELLOTT: Because it's being phrased
10 as only elongation, and I want to make that clear.

11 MR. KIRN: No, I mean we've been zeroing
12 in on that, but it would be low-temperature
13 flexibility test. And I guess just two other
14 comments. One, --

15 MR. PENNINGTON: So let me understand
16 you, Bill. I don't think that was clear from what
17 you gave us.

18 MR. KIRN: Again, what we propose as an
19 alternative would be a low-temperature flexibility
20 test in lieu of the tensile elongation tests
21 conducted at low temperature.

22 MR. PENNINGTON: Including the tensile
23 strength test at zero?

24 MR. KIRN: Yes.

25 MR. PENNINGTON: Okay, so that's

1 different than how we interpreted your petition.

2 MR. KIRN: Okay, again, it would be
3 mechanical properties at low temperature or low-
4 temperature flexibility at low temperature, as an
5 or/equal methodology.

6 MR. MELLOTT: So then we would be truly
7 falling back to what the requirements of 6083 are
8 for mechanical properties?

9 MR. KIRN: In terms of methodology.

10 MR. MELLOTT: Well, what would be
11 different then?

12 MR. KIRN: Well, we're looking at room-
13 temperature mechanicals, but we're looking at low-
14 temperature flexibility.

15 MR. PENNINGTON: So the elongation
16 requirement -- well, let me see -- so I guess
17 another way of asking his question is what would
18 stay within this table that's not in D6083.

19 MR. KIRN: The table 118 has got the
20 low-temperature mechanical properties in it. And
21 what we're asking for is just as an or/equal
22 including that portion of D6083.

23 MR. PENNINGTON: Okay, so let me try.
24 You're not proposing to remove the initial --
25 elongation at 73 degrees?

1 MR. KIRN: Right. Yes.

2 MR. PENNINGTON: Or to remove the
3 initial tensile strength at 73 degrees?

4 MR. KIRN: That's correct.

5 MR. PENNINGTON: It's only at zero --

6 MR. MELLOTT: Okay, so you would have a
7 somewhat elevated number for that result that
8 you're requesting?

9 MR. PENNINGTON: It's only the zero
10 degrees --

11 MR. KIRN: Yes.

12 MR. MELLOTT: We are just concerned
13 about method development in this way. It's just,
14 you know, there are some tried and true methods
15 such as ASTM D6083 that's been out there since
16 1997. We can actually go back and validate that
17 roofs that have met 6083 have performed in the
18 field. We can do environmental studies to make
19 sure that they performed in environments in the
20 California area.

21 I'm certain that there are products that
22 will meet this new table that will do the same
23 thing. However, we do have a long history with
24 the ASTM standard, and it seems like we're trying
25 to develop a method on the run here. It makes for

1 a difficult playing field.

2 PRESIDING MEMBER PFANNENSTIEL: I'm
3 hearing that, also. So, thank you. Bill, --
4 okay, go ahead.

5 MR. PENNINGTON: One of the things that
6 you mentioned is that you mentioned that it
7 inhibit, the current table with the amendments
8 inhibits the use of particular products. And
9 that's what I'm not understanding.

10 The table was drawn so that it would not
11 do that. And so, it would be really helpful if
12 you could tell us some specific cases where there
13 is a product that would have a problem meeting the
14 criteria.

15 MR. MELLOTT: We would have to dig into
16 the records of materials that were produced to
17 meet ASTM D6083 that have performed in the field
18 that do not specifically meet the new requirements
19 for tensile that are listed in table 118-C to
20 provide that information to you.

21 We have not done that to date. We know,
22 however, that many products are designed and
23 manufactured to strictly meet ASTM D6083 because
24 that is the specification that's in play.

25 We are not assured that they're being

1 manufactured to meet the new table. It was the
2 feeling of the Roof Coatings Manufacturers
3 Association that there were products in their
4 product family that would meet 6083, but would not
5 meet table 118-C. And therefore would not be able
6 to --

7 MR. PENNINGTON: Okay, so that's not
8 what we're understanding. We're not understanding
9 what those products are and what specific item in
10 the table is a problem.

11 MR. MELLOTT: Right. There are -- 6083
12 is a niche that we're dealing with specific about
13 acrylics or styrene acrylic products, you know,
14 come the new spec. That group, there is a group
15 of manufacturers in the RCMA that is concerned
16 that they are producing products to meet 6083 that
17 will not meet table 118-C because of the
18 difference in mechanical properties that they're
19 looking at.

20 I would have to, and the RCMA would have
21 to investigate specifically what percentage, or
22 what volume of those materials exist. But suffice
23 it to say there was enough of the manufacturers
24 that came forward and said they would have
25 problems, that we came forward with this letter to

1 the Commission.

2 Then there is the other issue of
3 silicone products, new products, development
4 products that may not meet this table, but can go
5 out and gain public acceptance through the
6 International Building Code or through ICCES, that
7 we want to have an avenue for new and novel and
8 innovative products to become available to the
9 California market.

10 Our concern is that if we have a table
11 that's based strictly on mechanical properties
12 that we're geared around somewhat 6083, then we're
13 kind of ignoring silicones we're ignoring solvent-
14 based.

15 It's very possible that those products
16 will meet your table, and our concerns will not be
17 justified for specific products. But there were a
18 number of products that were brought to our
19 attention by the Roof Coatings Manufacturers
20 Association that there was some concern over about
21 specifically meeting the table.

22 MR. KIRN: Just, let me comment on some
23 of this. I'm a member of ASTM and am following
24 what's going on in the roof coating area. There
25 are specifications in ASTM for silicone roof

1 coatings. There is a work in progress for
2 urethane, which is another type of chemistry. And
3 I'm not sure where that stands, but that will soon
4 be a product.

5 There is already, which was listed in
6 the RCMA letter, standard specifications for
7 chlorosulfonated and neoprene roof coatings, which
8 is another class of chemistry.

9 So there's already a very broad-based
10 series of specifications that exist. And they're
11 performance oriented. Some of the specifications
12 that Mr. Mellott listed are what are called, as
13 Mr. Pennington said, prescriptive specifications.
14 In other words, ASTM D2824 requires a certain
15 amount of solvent in a product, certain solids,
16 maybe a certain in-can viscosity, or how thick it
17 is. But it has nothing to do with performance.

18 So, it's important that we don't confuse
19 performance specifications, like we're talking
20 about here with D6083, or with this table where
21 versus ASTM specifications are listed strictly as
22 prescriptive. This is what's supposed to be in
23 the can. And I think that needs to be reiterated
24 here.

25 PRESIDING MEMBER PFANNENSTIEL: One last

1 comment here, and then, Bill, do you have more
2 questions?

3 MR. PENNINGTON: This is an important
4 issue to resolve --

5 PRESIDING MEMBER PFANNENSTIEL: I
6 understand --

7 MR. PENNINGTON: -- for coming up with
8 are we going to alter the language --

9 PRESIDING MEMBER PFANNENSTIEL: I'm not
10 sure we're going to resolve it in discussion right
11 here. It may be something that we'll take with
12 the information here and the Committee will need
13 to resolve.

14 But I would like to get on the record
15 here as much of the information as is pertinent.
16 So, we'll continue as long as necessary.

17 MR. MELLOTT: Just one point of
18 clarification to Mr. Kirn's comment. The RCMA did
19 not list ASTM D2824 or D6848, that was listed in
20 the prior language of 118 subjection whatever.

21 MR. KIRN: Well, again, you'd have to
22 say that --

23 MR. MELLOTT: What I'm saying is we
24 didn't put that in there, Bill. That was there
25 already. They put that in there. I agree with

1 you. The reason that we listed ASTM D1227 was
2 because it was already in AC75 for table 9. So we
3 tried to include language that was already in play
4 in California for acceptance of material.

5 I will agree that in one case, ASTM
6 D4586 it's an asphalt cement spec. I'm not
7 certain it fits, but I represent the Roof Coatings
8 Manufacturers Association and it was requested of
9 me to add that. That is the one portion of the
10 specs that is not a performance-driven
11 specification, per se. It's more of a, you know,
12 a compositional.

13 ASTM D6694 was another addition that was
14 not in AC75 or 1507.15, but that is the silicone
15 spec. And we felt it was very appropriate because
16 it was a performance spec.

17 What we're trying to do is make as many
18 products available to the California market as
19 possible. They're still going to have to meet the
20 energy requirements. There's no getting around
21 that.

22 That's why we didn't stumble so much
23 about putting ASTM D1227 in there. It's an
24 asphalt emulsion spec. It's not likely that it's
25 going to meet the reflectivity and emissivity

1 requirements of California. However, it was in
2 AC75, it was in 1507.15. It's already an
3 acceptable product by code in California. We felt
4 it should be included in the language.

5 And we were --

6 MR. PENNINGTON: So I guess to just
7 maybe wrap up here, from a conceptual vantage
8 point I think we're looking for performance
9 criteria that are similar to 118-C. And we're
10 also interested in knowing if there is something
11 about 118-C that is problematic for specific
12 products.

13 If it's not, then we don't have a
14 problem to solve basically. You know, if products
15 can meet 118-C then there's no reason to add more
16 ASTM alphabet soup kind of stuff here in the
17 standards, and confuse the building official who
18 now has to go look for six or eight ASTM
19 standards.

20 If we can say it succinctly in a table
21 that has performance criteria that can be widely
22 met, then that's preferable from our vantage
23 point.

24 And so if there is a true problem, where
25 then you can identify a product where 118-C

1 disadvantages that product inappropriately then
2 we'd like to find out about that and we'd like to
3 see, well, what is the comparable performance test
4 to the ones that are listed in 118-C for that
5 product.

6 And, you know, if we could get there we
7 could probably close and agree --

8 MR. MELLOTT: And our feeling is kind of
9 we're there and we're moving to 118-C. We have
10 the specifications in play for these material
11 types, and now we've created a new table that all
12 of these material types have to be pushed into.

13 We will have further testimony from an
14 individual company that I think will outline this
15 a little bit better. If it's required of us to
16 provide, you know, investigative activities to
17 show you that there are materials that perform in
18 the field by ASTM D6083 that don't specifically
19 meet your table in order to remove the table,
20 we'll do that. But we don't have that.

21 MR. PENNINGTON: Just on D6083, the only
22 things that the table covers that's beyond D6083
23 is the percent elongation, right? And --

24 MR. MELLOTT: Well, actually, there's a
25 table that was created. I have a copy, and it was

1 out front, that will show you the differences
2 between table 118-C and 6083. There is a
3 difference in tensile and I believe a difference
4 in elongation. I have to go back and look at what
5 you're going to be pulling out if you pull out
6 based on the petition.

7 MR. PENNINGTON: So the problem that the
8 petitioners brought to us is that the flexibility
9 should replace the elongation.

10 MR. KIRN: At zero.

11 MR. MELLOTT: Right.

12 MR. PENNINGTON: And they also have said
13 now that they think that they had intended to have
14 us understand that to be replacing the tensile
15 strength.

16 MR. MELLOTT: All the cold is gone now;
17 we just use elongation.

18 MR. PENNINGTON: So the only remaining
19 piece here that is different than D6083 is the
20 elongation at 73.

21 MR. MELLOTT: Right.

22 MR. PENNINGTON: And so the question is,
23 is that truly a problem for your manufacturers; or
24 if it's not, then you know, we don't have a
25 problem to solve.

1 MR. MELLOTT: Without indicating
2 manufacturers' names or quantities, my business,
3 or at least a part of my business, is a third-
4 party test lab.

5 We do know for a fact that many of the
6 manufacturers formulate their products to be
7 within the range of 100 to 200 percent elongation
8 at room temperature, between 160 to 140 percent
9 elongation. Many of those come in, and that's
10 where they lie.

11 Statistically I have no significance for
12 you. That's just what I see that comes across
13 that I sign. So I know that there are products
14 that would not meet the 200 percent elongation.

15 And you've also dropped the tensile
16 strength on your product. If you go to table
17 118-C you're doing from a 200 psi requirement for
18 6083 to a 100 psi requirement for table 118-C.

19 So we're kind of inventing something to
20 try to get elongation. We just feel that the spec
21 is in place and alterations of the spec without
22 long-term investigation or some type of
23 investigation can end up being erroneous.

24 And we also have to continue to consider
25 that there are other materials such as the sprayed

1 silicone that have different kind of requirements.
2 If you look at the table that we provided it is
3 not specified to meet the minimum elongation
4 requirements of title 118-C.

5 So, if someone is formulating a product
6 to meet ASTM D6694 for a silicone coating, they
7 are not formulating it to meet the 200 percent
8 minimum elongation at break of 200 percent.
9 They're formulating it to meet a minimum
10 elongation of 100 percent.

11 So there is concern.

12 PRESIDING MEMBER PFANNENSTIEL: I think
13 we have heard your concerns, and I really thank
14 you for sharing them. We will consider them as we
15 make a determination within this Efficiency
16 Committee, and then with the whole Commission on
17 how to act on this. But, I appreciate your
18 interest and your very useful information.

19 MR. MELLOTT: Thank you.

20 PRESIDING MEMBER PFANNENSTIEL: I do
21 think there will probably be more interaction with
22 staff to make sure that we all understand each
23 other on this. But, thank you.

24 MR. MELLOTT: Thank you.

25 MR. HITCHCOCK: Thank you.

1 PRESIDING MEMBER PFANNENSTIEL: We have
2 others who would like to speak to this table. I
3 think the next is Paul Beemer from Henry Company.

4 MR. BEEMER: Good morning.

5 PRESIDING MEMBER PFANNENSTIEL: Good
6 morning.

7 MR. BEEMER: Is this on?

8 MS. HEBERT: Push the button where it
9 says "push".

10 PRESIDING MEMBER PFANNENSTIEL: The
11 green light should come on.

12 MR. BEEMER: Got it. Good morning. I'm
13 Paul Beemer; I'm with Henry Company in Los
14 Angeles.

15 As I believe you can tell from the
16 comments that we submitted, although very
17 recently, Henry Company is, in fact, neutral on
18 the issue of which standard to use for cold
19 elongation. Because we feel that for the majority
20 of roof substrates out there that is an irrelevant
21 property.

22 For the extreme case of foam roofing it
23 is absolutely vital to have high elongation in any
24 coating you put on it.

25 Probably at least half the roof

1 substrates out there have elongations of 1 or 2
2 percent. And high elongation is just not related
3 to durability of the product.

4 In point of fact, in general, we don't
5 believe that either 6083 or table 118-C, the
6 physical measurable properties are, in fact,
7 correlated to durability of a specific coating
8 over a specific substrate.

9 As an example, in the case of tensile
10 strength, up to the point where the roof is so
11 weak that foot traffic will damage the surface you
12 don't want the coating to have high tensile
13 strength.

14 The worst thing that can happen is for
15 it to get into a tug-of-war with the substrate and
16 win, because then it will damage the roof. The
17 next worse is that it loses and you damage the
18 coating. You don't want either of those cases.
19 You want the coating to lie there and not bother
20 anyone.

21 In the case of high elongation the
22 things you do to get high elongation may be
23 incompatible with success over other roof
24 substrates.

25 Henry makes a large number of roof

1 coatings for different roof substrates. The
2 coatings are different because they are optimized
3 for their target. As it happens, the coatings
4 that were developed over the years for application
5 of foam have no problem meeting 6083, have no
6 problem even meeting the table 118-C. Almost
7 pushing it, in the case of the urethanes.

8 But the ones that are optimized for
9 properties that are desirable over the asphaltic
10 surfaces, which are the majority of roofs that are
11 out there waiting to be coated, if you soften the
12 coating and use very soft latex to get high cold
13 temperature elongation you tend to degrade
14 durability; you tend to increase the bleed of
15 darkening oils from the asphalt into the coating.

16 In my comments I put in a photograph of
17 a test panel we did six or seven years ago. The
18 only difference between the first three coatings
19 is the one on the left is a production coating.
20 The next two had softer polymers in, but the
21 pigment mix was otherwise unchanged.

22 None of those, in fact, would meet 6083
23 or 118-C. And yet the production coating has
24 chugged along for 20 years, keeping roofs white in
25 southern California.

1 An example of why these properties may
2 be unnecessary that I believe we can get the data
3 on? The Midwest Roofing Contractors Association a
4 year ago completed a five-year study in
5 Minneapolis, Kansas City, St. Louis and Dallas,
6 where they tried to do a one-coating-fits-all type
7 test.

8 They applied nine different coatings to
9 half a dozen different roof substrates in each of
10 those cities. And obviously some did better in
11 some places than others.

12 But in the case of the white coatings,
13 according to the protocol of that test those were
14 not premiere coatings, they were supposed to be
15 tier two, kind of general purpose, contractor-
16 grade stuff. They're doing quite well in
17 Minneapolis. They're doing quite well in Dallas.

18 Those coatings would not meet 6083.
19 They were never EnergyStarred. They were just
20 garden variety, not top-of-the-line guys. And
21 those properties are simply not relevant to
22 successful performance and durability.

23 PRESIDING MEMBER PFANNENSTIEL: Thank
24 you, Mr. Beemer. Bill, do you have questions? Or
25 Elaine?

1 MR. PENNINGTON: Yeah, I'm curious. I'm
2 sort of curious about what Bill's reaction is to
3 what Paul was saying.

4 The coatings that you were talking about
5 go over asphalt. And that's not the coatings that
6 are subject to exception 1, is that right?
7 There's an existing exception 1 for aluminum-
8 pigmented asphalt.

9 MR. BEEMER: No, no, no, I'm talking
10 about white coatings intended to go over asphalt.

11 MR. PENNINGTON: Okay.

12 MR. BEEMER: These are not --

13 MR. PENNINGTON: These are not --

14 MR. BEEMER: -- aluminum-pigmented
15 coatings.

16 MR. PENNINGTON: -- aluminum --

17 MR. BEEMER: I'm talking white acrylic
18 latex coatings in particular. As has been pointed
19 out by other people, there are a whole lot of
20 different coatings out there that are not latex-
21 based, that are not acrylic-based. There's
22 urethanes, one and two part. There's silicones;
23 there's epoxies. There's all kinds of stuff out
24 there. Those are outside my personal experience.

25 I was just talking about water-based

1 acrylic latex coatings designed for use over
2 asphalt.

3 MS. HEBERT: If I may, are there ASTM
4 standards that apply to those particular coatings
5 for performance or --

6 MR. BEEMER: ASTM 6083 is the only
7 specification I know that applied to white acrylic
8 roof coatings. And in our opinion the physical
9 properties are pretty much irrelevant to actual
10 real world performance.

11 We make coatings that conform to 6083.
12 But that's a market-driven issue rather than a
13 performance-driven issue.

14 MR. KIRN: A comment to Mr. Beemer.
15 Before I joined National Coatings Corporation here
16 in California I worked for Rohm & Hass Company for
17 30 years. And 25 of those years I spent
18 developing acrylic polymers for roofing
19 applications. So I probably know a good bit about
20 what really goes into the can.

21 And one of the things that Mr. Beemer
22 commented on was in a study that he had done, and
23 pictures he provided in his petition, there were
24 some differences in bleed-out. A white coating
25 started white and got dark in color.

1 But we know that a lot depends upon how
2 that coating is formulated; what polymers are
3 used; and also what the substrate is. Certain
4 roofing substrates, like asphalt emulsions,
5 asphalt cutbacks, which may not be a typical
6 roofing substrate that would be used in practice
7 are sources for bleed-out. So there may be some
8 issues there as far as how an experiment is set up
9 and the differences that you see.

10 One of the things that we learned very
11 early on at Rohm & Hass, and this goes back to
12 1980, was that housepaints didn't work as roof
13 coatings. That roofs are dynamic, they expand and
14 contract. While Mr. Beemer talks about 1 percent
15 elongation, there's still hairline cracks that
16 develop that have an even higher elongation
17 locally versus the entire roof itself, where you
18 get only 1 percent.

19 And we learned early on that for a roof
20 coating to be successful it had to have some
21 degree of elastomer behavior. In other words, in
22 Miami, Florida, where it doesn't get all that
23 cold, housepaint may work. But as you move into
24 colder and colder more northern latitudes, the
25 need for some degree of low temperature

1 requirements is there.

2 And we found this out very early on.

3 It's been well documented, and there's plenty of
4 data on that one.

5 MR. BEEMER: I don't think anyone has
6 suggested using housepaint on roofs. Housepaint
7 has evolved for an entirely different niche. And
8 the fact that someone on the street opening two
9 cans couldn't tell them apart does not mean that
10 they are at all the same. And I wasn't talking
11 about using housepaint on a roof.

12 PRESIDING MEMBER PFANNENSTIEL: Thank
13 you, Mr. Beemer, for your comments.

14 We also have Stan Pepper of
15 Greenproducts who would like to speak on this.

16 MR. PEPPER: Thank you, Commissioners.
17 My name is Stan Pepper with Greenproducts. My
18 associate, Grant Grable, has joined me this
19 morning.

20 Greenproducts is a company that has
21 developed products, and our mission is to develop
22 products with biobased and rapidly renewable
23 resources. Our products have been in the
24 California market for ten-plus years.

25 They have been developed in order to

1 have better adhesion and less elongation to match
2 the substrates below. And we feel that the
3 Commission has, in table 118, set performance
4 requirements that don't necessarily comply with
5 the entire gamut of coatings in the marketplace.

6 And like the Henry's coatings comments
7 beforehand, we think that there are other products
8 out there that the marketplace needs.

9 Our product has been around, as I said,
10 for ten-plus years in California. We're out of
11 Illinois. And it is white; and it is in a bucket;
12 and it looks like roof coatings. But that is
13 where the similarity ends.

14 We do have reflectivity of .77, an
15 emissivity of .93. But we also have our perms are
16 less than 1. And so the energy requirements of
17 less than 50 perms in the table 118 now, we're at
18 less than 1. We are a waterproof coating; we are
19 not just necessarily a roof coating. We've
20 specifically designed it, our different products
21 for different temperatures in different climates.
22 And the one-size-fits-all is not doing justice for
23 the California market nor for the national market.

24 We feel that the performance
25 requirements, as has been stated earlier, do not

1 guarantee long-term performance aspects on a roof
2 coating just because it has elongation or
3 different properties in 118.

4 We feel that, on top of that, our
5 products adhere and chemically bond with the roof.
6 They have elongation that is better than the roof
7 substrate below it, so it will always move with
8 the roof. But the adherence and the waterproofing
9 aspects gives it another protective coating that
10 is important for the life and longevity of the
11 roof.

12 I think in very simple terms, and if I
13 have a notebook that has -- that I take notes in;
14 it has paper and it's black. In the old school
15 that I am, I have to take notes in this. That's
16 the way I work. And if it's flexible, if I drop
17 it, it doesn't break.

18 But my associate also has a black
19 notebook that has paper and takes notes. But it
20 isn't flexible and if he drops it, it'll break.
21 But it is a computer and it is designed with much
22 more flexibility and much more strength and much
23 more opportunities to do more things with his
24 notes. Of course, he's much more technically
25 advanced than I am.

1 And this simple illustration is to show
2 that all coatings aren't the same. And generic
3 requirements that are designed for across the
4 country don't perform in Alaska as they perform in
5 Texas. We have different formulations for
6 different areas.

7 The medical community has found that
8 "two aspirins, see me in the morning" doesn't
9 work. They have gone to individual therapies from
10 individual antibiotics to individual cancer
11 research treatments that are designed for each
12 individual's genetic makeup.

13 Now, we haven't come that far; neither
14 has Henry's or other coating manufacturers. But
15 we're certainly going in that way because we want
16 to have the best performance in the area that
17 we're at. And San Diego and northern California
18 have two different climates that have to be
19 addressed. Shouldn't have overall requirements
20 that limit and dumb-down performance aspects of
21 new technologies.

22 We think table 118 is going to stifle
23 competition and innovation and opportunity in the
24 California marketplace, and would like the
25 Commissioners to keep that in mind.

1 PRESIDING MEMBER PFANNENSTIEL: Thank
2 you very much for your comments. Bill, did you
3 have questions?

4 MR. PENNINGTON: Yes. Are there
5 criteria in 118-C that your product cannot meet?

6 MR. PEPPER: The cold elongation.

7 MR. GRABLE: And initial elongation.

8 MR. PENNINGTON: The cold elongation.

9 MR. PEPPER: And they're designed not to
10 meet them. They're designed to meet the substrate
11 roofing underneath.

12 MR. PENNINGTON: Okay.

13 MR. PEPPER: And don't bear upon the
14 performance of our coating.

15 MR. PENNINGTON: So, could your products
16 meet the flexibility requirement that's proposed
17 by the petitioner?

18 MR. PEPPER: We think, if we go back --
19 if I try to tweak what you're doing then you're
20 going to have more manufacturers in here with more
21 tweaks.

22 If you put a waterproof coating section
23 in for us, or for other waterproofers, less than 1
24 perms, the Commission is going to have a building
25 code that they're going to have to establish and

1 maintain forever.

2 And, as pointed out, California does
3 come east. While I live in Chicago, things that
4 happen in California I know they're going to join
5 us. So, if this is developed here it will be
6 extrapolated around the country. And if people
7 pick up 118 and their temperature and climates
8 don't necessarily match the requirements that 118
9 tries to address, it's going to do a disservice to
10 the entire country.

11 MR. PENNINGTON: So your products cannot
12 meet the flexibility requirement that's proposed,
13 is that what --

14 MR. PEPPER: Again, yeah, I think they
15 can meet --

16 MR. PENNINGTON: I just -- understand --

17 MR. PEPPER: Some of our products can,
18 some of them cannot.

19 MR. PENNINGTON: Okay.

20 MR. PEPPER: But that's not the point
21 I'm trying to make. If I say yes, and you say,
22 okay, we can keep that in, that's not my point.
23 My point is that it is immaterial to the
24 performance on the roof substrate underneath.

25 MR. PENNINGTON: Okay.

1 PRESIDING MEMBER PFANNENSTIEL: Thank
2 you, Mr. Pepper.

3 MR. PEPPER: Thank you.

4 PRESIDING MEMBER PFANNENSTIEL: Next we
5 have Chris Fisher of Uni-Glaze.

6 MR. FISHER: Ready?

7 PRESIDING MEMBER PFANNENSTIEL: Yes.

8 MR. FISHER: Hi, I'm Chris Fisher with
9 Uni-Glaze. And -- coming in for the same reason
10 what everyone's talking about, but for a complete
11 different set of circumstances.

12 What we do is we have coatings for
13 concrete and clay tile roof, which is also part of
14 title 24 for the pitched roof section. And as a
15 result of that we've got a coating that's
16 completely different to the specification that's
17 already written.

18 And apparently because there's no other
19 standard for coatings for concrete and clay tiles,
20 they're basically, I think, defaulted back to the
21 118 standard for the 20 mils dry film thickness
22 and the elongation and tensile strength, et
23 cetera.

24 But for concrete and clay tiles it's a
25 completely different type of coating system.

1 We've been using this in Australia and New Zealand
2 for the last 40 years. We probably do between
3 50,000 and 80,000 concrete tile roofs a year, and
4 the vast majority of the manufacturers down under
5 use high polymer coatings like this.

6 We look for completely different types
7 of features. So what I'm kind of asking for today
8 is either to wipe out any standard at all for
9 concrete and clay tiles, or have something that
10 basically reflects the type of system that goes on
11 these tiles right now.

12 I've spoken to Bill in the past about
13 this; we've corresponded through emails. And I'm
14 probably the only person who will ever get up and
15 talk about concrete and clay tile systems. But we
16 look for a completely different type of physical
17 properties. We don't need 20 mils dry thickness,
18 we don't need, you know, 300 and 400 percent
19 elongation. We're looking for different types of
20 things like high gloss levels, high TG levels, et
21 cetera.

22 The typical film thickness on
23 cementitious tile is 4.5 to 6 mils. We do have
24 standards in Australia. If you're looking at
25 ranges, we don't go lower than 3 mils, usually 4

1 to 4.5 mills is the standard down under. In the
2 USA we apply these coatings at 6 mils. And they
3 will last, you know, a significant period of time.

4 Typically when these coatings are
5 applied in Australia, I'm talking about the
6 deserts, very very hot like in northern
7 Queensland, you get 15 to 20 years between
8 recoating.

9 So all we're asking for is you've got
10 another standard for concrete and clay tiles, and
11 maybe this might be relevant for 2008 as well, if
12 you're readjusting your standards.

13 I'm in the process right now of
14 finishing writing the standards, my standards, for
15 application, physical property standards of
16 concrete and clay tiles. I'm going to submit a
17 copy to the California Energy Commission, next
18 week, I'm submitting a copy to the Roof Tile
19 Institute. These are the manufacturers that make
20 all the roof tiles in America.

21 I'm submitting a copy to the National
22 Roof Contractors Association. I'm also submitting
23 a copy to the California Contractors Licensing
24 Board of the standards that we think are more a
25 propos to this type of substrate. We don't think

1 that 118 is relevant to what this type of coating
2 is.

3 PRESIDING MEMBER PFANNENSTIEL: Thank
4 you. Bill?

5 MR. PENNINGTON: Questions. The thrust
6 of the coating requirements is related to low
7 slope roofs.

8 MR. FISHER: Right.

9 MR. PENNINGTON: And the tiles that
10 you're talking about generally don't get installed
11 on low slope roofs, is that correct?

12 MR. FISHER: Well, all I know that when
13 I was pursuing this I went to a lot of the actual
14 manufacturers to get title 24 compliant. I
15 thought the standard would just be reflectance and
16 emittance for the factory-applied coatings. And I
17 thought that same standard, which didn't require
18 physical properties, would also pass into the
19 field-applied coatings, as well. But it looks
20 like 118, because there is no standard for this
21 year. It's being defaulted back to this standard,
22 as well. And I don't think it's the worst -- it's
23 not the right standard.

24 MR. PENNINGTON: So, I asked you whether
25 those are installed on low slope roofs typically.

1 MR. FISHER: Right. Higher than two in
2 twelve.

3 MR. PENNINGTON: Higher than two in --
4 so they're generally not installed in low slope
5 roofs --

6 MR. FISHER: No, no, no, --

7 MR. PENNINGTON: -- which is sort of the
8 thrust of what this coating thing is all about.

9 MR. FISHER: Right, right. But there's
10 a requirement in title 24 that for the mansards
11 around your industrial buildings, if they're going
12 to be coated, they have to meet the 118 standard.
13 And that's what we don't think is right.

14 MR. PENNINGTON: The other aspect of it
15 is that the coating requirement in 118-C is a
16 field-applied coating.

17 MR. FISHER: Right.

18 MR. PENNINGTON: And where the coating
19 is installed like on, you know, embedded, often in
20 tiles --

21 MR. FISHER: Right.

22 MR. PENNINGTON: -- at the manufacturer.
23 118-C has no relevance to that situation, so.

24 MR. FISHER: Yeah, -- have relevance to
25 either, because when you -- I mean if you look at

1 like the reflectance standards, it's easy to meet.
2 Even the emissivity; the emissivity of concrete is
3 in the 90s. So even if you do a factor-applied
4 coating it's going to be high and we need to do it
5 to meet those, for reflectance.

6 But a lot of times, we're doing this, we
7 just did a shopping center in Redding, 35,000
8 square feet -- commercial building. Sorry, just
9 lost my train of thought here --

10 MS. HEBERT: You installed it after the
11 fact?

12 MR. FISHER: After the fact. It was a
13 30-year-old roof. It was the color-on, slurry
14 coated tile roof. And we coated it with this high
15 polymer film, replaced it; it was the right
16 system. We didn't follow 118 standard because it
17 really doesn't apply to what we were doing.

18 We're probably the only ones who would
19 ever come up and bring this up, but it's probably
20 a good forum to do it.

21 But there will be a lot of opportunities
22 out there when people are doing the decorative
23 tile with the mansards around, shopping centers or
24 commercial buildings, industrial buildings. And
25 when they look at the standard they say, oh, we

1 must meet 118, and we have to put on 20 mils dry
2 film thickness. And we don't think that's the
3 right standard.

4 MS. HEBERT: Yes, still we're looking at
5 low slope for those mostly. So it's possible that
6 in the 2008 standards we'll be looking at high
7 slope and your product will be more relevant at
8 that point. And we'd want you to take part in the
9 2008 discussions.

10 MR. FISHER: Great. Just one other
11 thing that should be a big concern here. We're
12 not, a lot of the contractors apply the flat roof
13 coatings, there's lots of years of training and
14 there are standards and so on.

15 But what I'm finding in my three years
16 with this polymer coating here is that very few
17 people know how to apply the coating properly.
18 And, you know, you have a standard for doing the
19 flat roofs. You clean them, you tape them, you
20 coat them and so on. But what I'm finding out
21 there in the field is there are a lot of people
22 who are coating cementitious tiles are not really
23 knowing what they're doing.

24 So we need a standard for them. I'm
25 writing one. I just didn't write my own standard;

1 I did it in combination with three other
2 Australian companies. And combined, they probably
3 do around 50,000 tile roofs a year. So all three
4 of them, plus myself, plus one American company,
5 wrote what we think are reasonable standards.

6 PRESIDING MEMBER PFANNENSTIEL: Thank
7 you, Mr. Fisher.

8 MR. FISHER: Thanks.

9 PRESIDING MEMBER PFANNENSTIEL: We'll
10 probably hear more from you when we start on the
11 '08 standards.

12 MR. FISHER: Thank you.

13 PRESIDING MEMBER PFANNENSTIEL: Thank
14 you so much. Chris Salazar from the Karnak
15 Corporation.

16 MR. SALAZAR: I promise to be brief.
17 What I wanted to do is just -- first of all, Chris
18 Salazar, Vice President of Sales and Marketing for
19 Karnak Corporation. We're a manufacturer of a
20 variety of coatings for roofing application.

21 And what I wanted to expand a little bit
22 on, Paul mentioned the MRCA study, which was a
23 five-year study of different coatings applied in
24 different roofing climates throughout the country.

25 And I've heard the term performance

1 thrown around a lot up here. And I guess the
2 question I have is are we referring to performance
3 if a coating still has elongation after five
4 years, but is no longer reflective? Is that a
5 coating that is performing well?

6 Or are we looking for performance that
7 saves energy? Coatings are intended to be a
8 sacrificial part of a roofing system. It's a way
9 to maintain a roof and extend the life.

10 So, is this Commission looking for
11 coatings that retain their elongation or retain
12 their reflectivity and emissivity, and the
13 features that can save California -- or reduce the
14 energy consumption in California?

15 Those roofs of the MRCA study, some
16 coatings -- and we were -- Paul and I were
17 surprised to see that some of these coatings that
18 did not perform well in terms of surface
19 characteristics, some of them had hairline cracks,
20 still retained a great deal of reflectivity, more
21 than we expected to see, quite frankly.

22 So the question becomes what is
23 performance --

24 MR. PENNINGTON: Do you want me to
25 respond to the question? Do you want me -- I'm

1 not sure if the question --

2 MR. SALAZAR: Yes.

3 MR. PENNINGTON: -- is for us to respond
4 to it at this point or not?

5 MR. SALAZAR: No, it's more of a
6 rhetorical question. And I think it's just
7 something I'd like to point out that --

8 MR. PENNINGTON: So we are moving to
9 age-tested reflectance and emittance
10 determinations. This particular provision in the
11 standard is related to the other characteristics
12 and the durability of the roof so that it will
13 stand up. And if we're going to give a lot of
14 credit to cool roofs and we're going to let
15 tradeoffs be taken where lots of windows can be
16 added to buildings or a less efficient air
17 conditioner can be installed in the building, we
18 want to make sure that the products that are
19 installed to be the cool roof will be durable. So
20 that's what this piece is about.

21 We don't have at the moment a age
22 determinant reflectance and emittance, but the
23 Cool Roof Rating Council is moving rapidly to
24 implementing a system where that's going to be
25 measured. And we're planning to consider that for

1 the 2008 standards.

2 So we'll cover not only what we're
3 trying to cover in this, but we'll also be looking
4 at the durability of the reflectance and
5 emittance, as well.

6 MR. SALAZAR: Very good. And just to
7 expand a little bit more, earlier you had
8 mentioned that you were asking a question about
9 what products would be eliminated, or are being
10 eliminated by the table.

11 I think there's a variety of products
12 that have been out in the field that don't meet
13 table 118-C but that perform very well. And those
14 roofs that we saw at the MRCA, a lot of those
15 coatings don't meet that table, but yet performed
16 outstandingly well in terms of reflectivity and
17 emissivity.

18 MR. PENNINGTON: What kind of coatings
19 are those?

20 MR. SALAZAR: They were acrylics; they
21 were rubberized aluminum coatings; they were white
22 pigment emulsions. And, again some met the
23 reflectivity requirements, some did not. But
24 overall they all performed very well.

25 And I think that what I'd like to point

1 out to you as a suggestion is that you may be
2 neglecting a lot of cost effective options that
3 can achieve what you're looking to get in terms of
4 energy efficiency.

5 PRESIDING MEMBER PFANNENSTIEL: Thank
6 you.

7 MR. SALAZAR: Thank you very much.

8 PRESIDING MEMBER PFANNENSTIEL: That's
9 what we're concerned about. Thank you for your
10 comments.

11 MR. SALAZAR: Appreciate it.

12 PRESIDING MEMBER PFANNENSTIEL: Next we
13 have, and I'm afraid I might get the name wrong,
14 Don Vernarsis (phonetic). Did I do it wrong?
15 Applied Polymers. Dan Vernarsis. I apologize.
16 With a name like mine, I think I should be a
17 little more sensitive to that.

18 MR. VERVAIS: My name's Dan Vervais and
19 I represent Applied Polymer Systems. I've been
20 fortunate to be part of this whole process since
21 our first meeting down at Berkeley Laboratories
22 when they were doing the initial conversation or
23 bringing the EnergyStar program in the roofing
24 project partner. And I'm, you know, very proud of
25 the State of California for taking a leadership

1 role and willing to take the flak, so to speak, in
2 terms of what's been going on here.

3 I just had three comments I wanted to
4 make. In terms of field performance of what's
5 being modified, I do have the experience of
6 working with these products in cold climates,
7 Reno, Nevada, Incline Village, South Lake Tahoe,
8 Mt. Shasta City, all throughout up northern Marin
9 County. And even places down around south of the
10 Bay Area and Gilroy where they do go through the
11 freezing temperatures.

12 And based on what's being suggested as
13 far as the changes, there's hundreds of thousands,
14 if not millions, of square feet of roofs that are
15 out there in excess of ten years old.

16 When we originally sat down and were
17 part of the process of trying to decide what the
18 performance criteria was of these roofing
19 products, to me it's interesting that the
20 performance of the roof, itself, was never brought
21 into question. It's just the performance of the
22 coating.

23 And in a side note, I don't know if
24 you're familiar, there's a situation in Houston,
25 Texas right now where there's a pending lawsuit on

1 Minuteman Stadium because the person that put the
2 cool membrane on the stadium, there seems to be an
3 inefficient biocide package and it turned black.
4 And the comment that they came back in a court of
5 law was, well, we never guaranteed the emissivity.

6 And for the state to be willing to stand
7 up and say to the manufacturers that want to go
8 through and work with the California Energy
9 Commission, the Cool Roof Rating Council program,
10 and the EnergyStar program, it's all voluntary.
11 And the people that want to work and participate
12 in the marketplace will make it competitive.

13 And if the state decides on a
14 performance criteria for a coating that they feel
15 will be acceptable in California, the
16 manufacturers that want to participate in it will
17 move and formulate products, change their data
18 sheets to make it easier for building officials,
19 and do whatever is necessary to be able to compete
20 in the marketplace.

21 I understand the comments, the silicones
22 and urethanes, I've worked with those products
23 personally. In southern California you cannot
24 install silicone coatings anymore. They don't
25 meet the Clean Air requirements.

1 This morning I watched a lot of
2 specifications being brought out, a lot of
3 different points. There may be some parts of this
4 that is really confusing, but I think the Energy
5 Commission is moving in a right track, and your
6 efforts should be applauded.

7 Thank you.

8 PRESIDING MEMBER PFANNENSTIEL: Thank
9 you very much, Mr. Vervais. I think now we're
10 going to move to the next item on the agenda. And
11 if there are others who want to come back to this
12 we can do so at the end. But the next item has to
13 do with the dry mil thickness.

14 And I was asked that Superior Products
15 begin the discussion. Either place, either at the
16 podium or take a seat if it's more comfortable.

17 MR. SMITH: Thanks. I have some
18 documentation that I'd like to present. Who do I
19 present that to, to you?

20 PRESIDING MEMBER PFANNENSTIEL: Yes,
21 certainly.

22 MS. HEBERT: And please identify
23 yourself when you get back to the mike.

24 MR. SMITH: Okay.

25 MR. PENNINGTON: So is this different

1 than your filing? Or is it the same as your
2 filing?

3 MR. SMITH: Well, it has different
4 information --

5 MR. PENNINGTON: Okay. Yes.

6 PRESIDING MEMBER PFANNENSTIEL: I don't
7 know. Yeah, why don't you hand that to them,
8 please.

9 MR. PENNINGTON: I'd like to see --
10 thank you.

11 MR. SMITH: My name is Craig Smith; I'm
12 with Superior Products International in Kansas
13 City. And we manufacture a coating called
14 SuperTherm. And it's a water-based emulsion. It
15 is a product that has a blend of acrylics and
16 urethanes in it and so on.

17 And basically what we have found in the
18 last 15 years that we've been making the product
19 is that 10 mils product is sufficient for the
20 needs. It has the performance. And what we are
21 looking at is basically looking at a little bit
22 maybe newer of a technology than what has been,
23 you know, in the past, or at least a different
24 blend, as it were.

25 There's -- basically what we do is we

1 apply it 16 mils wet and mils dry. And it has
2 good adhesion. It's really a combination of the
3 resin system, itself, along with the performance
4 of the coating, itself, also.

5 As we've discussed on the phone a few
6 times about the performance that we have and the
7 capabilities that we have, that it tends to not be
8 so much affected as far as weatherability and
9 things like that, because of the characteristics
10 of the product, itself. So therefore it doesn't
11 go through the deteriorating.

12 If you open the notebook I'll just
13 quickly go through this, if I can, just review
14 this. And basically what I'm requesting is a
15 change to be made from the 20 mil dry thickness to
16 a 10 dry mil thickness.

17 And it's our understanding that
18 basically this 20 mil dry thickness came from
19 other manufacturers that have done this in the
20 past, or their recommendations when this was
21 implemented, when it was first put in, that that's
22 where this recommendation came from.

23 But, like I say, I don't know if there
24 was any testing done at that point on any other
25 dry mil thickness or not.

1 But we looked at having about 10 to 15
2 years experience out in the field. And the
3 documentation behind it shows this. Also, we have
4 about not 5 percent, but .05 percent, or a half of
5 1 percent, in any type of problems out in the
6 field, also.

7 If you skip over a couple of pages, this
8 starts talking about our largest distributor,
9 which is over in Japan. We are a international
10 company that we send product all over the world;
11 to Australia, as was mentioned before, but all
12 over the world. And it has performed all over the
13 world.

14 But if we move over a bit you can -- I'm
15 getting in front of myself here -- let me just go
16 ahead and go through this. Daiko Shokai is our
17 largest distributor. They've done about 27
18 million square feet of roofing in Japan.

19 As a matter of fact, in this, and
20 there's documentation in here to show it, that we
21 also, in the Japanese market, own over 70 percent
22 of the coatings marketed in Japan.

23 But anyway, you know, they have used it.
24 They have also done a study recently, which is in
25 here also, of they went back and did another test

1 on the coating for performance ten years later.
2 And it shows that the performance is the same ten
3 years later as it was the day they put it down.
4 But there's documentation here; we'll come back to
5 that.

6 The EnergyStar Commission, if you --
7 this was something that we did a few years ago,
8 basically if you turn a couple pages over there's
9 a comparison in here, quickly, to two of the
10 leading manufacturers of other roofing coatings.
11 And you look at those compared to what Supertherm
12 did in the three-year study that CoolRoof did,
13 basically one of them lost 9 percent in
14 reflectivity; another lost 21 percent in
15 reflectivity; and then SuperTherm lost 1 percent
16 in reflectivity over the three years. And the
17 documentation off the website is in the following
18 pages.

19 Daiko Shokai, getting back to them, I
20 was just going to show you there's a company
21 profile there. The next page is actually, this is
22 a copy of the leading architecture magazine over
23 in Japan. The very next page shows an article
24 that they did on this particular roof when doing
25 this ten-year study. The very next page shows

1 that this Kokuyo Company, Ltd. where they did this
2 testing, it has documentation regarding that.

3 The next page is showing the market
4 share in Japan, and the statements regarding that.
5 SuperTherm over in Japan is actually private
6 labeled as CoolTherm over there. And there's a
7 number of different projects that's recorded,
8 showing their testing here, and so on, with all
9 the documentation showing the thermocouple
10 readings and so on.

11 Behind that you'll find some reports
12 done by the Florida Energy Commission -- or
13 reports for them. One of the tests was done in
14 Florida on a roof down there. And then another
15 test, we asked the gentleman, Al Othmer (phonetic)
16 from Florida, to come up and do some testing on
17 some small buildings that we did up in Denver.
18 And basically had SuperTherm as compared to a
19 traditional white reflective coating. And there's
20 thermographic pictures in there where you'll be
21 able to see the difference and so on.

22 And the point I'm trying to make with
23 this is that along with -- I'll skip back to the
24 very front in here, too look under the laboratory
25 testing, because -- I guess the point I'm trying

1 to make is that because of the performance and the
2 insulation ability that we have, and act more as a
3 type of a radiant barrier, that it does not allow
4 for the UV, the infrared and so on, to eat up the
5 coating and to be able to affect it like it does a
6 lot of other coatings.

7 So, basically as you can see when you're
8 looking at the Certified Laboratory testing here,
9 you know, of course you got even just a small 450-
10 hour salt spray test, you got high-temperature
11 surface performance test, your typical tensile
12 strength, things like that and so.

13 One of the things that I did want to
14 point out to you was the C-236 hotbox test, which
15 basically we outperformed fiberglass, we
16 outperformed a lot of other type of insulations in
17 that particular test, also.

18 Now, all this testing -- as a matter of
19 fact I brought, if you want to look through it,
20 you can, that --

21 PRESIDING MEMBER PFANNENSTIEL: Mr.
22 Smith, is --

23 MR. SMITH: Yes.

24 PRESIDING MEMBER PFANNENSTIEL: -- this
25 the first time this information has been available

1 to the staff as they've considered the building
2 standards?

3 MR. SMITH: Well, I sent them some
4 information, you know, prior. As soon as
5 basically we got involved in this discussion.

6 PRESIDING MEMBER PFANNENSTIEL: So is it
7 a matter that you weren't involved early enough in
8 the discussion to affect the outcome of the --

9 MR. SMITH: Right, the --

10 PRESIDING MEMBER PFANNENSTIEL: -- of
11 the '05 building standards?

12 MR. SMITH: Right. The first that we
13 got involved basically with them was in Orlando, I
14 believe, at the --

15 MS. HEBERT: February at the --

16 MR. SMITH: Yes, in February.

17 MS. HEBERT: February of this year he
18 heard a talk that I gave at the Cool Roof Rating
19 Council meeting.

20 MR. SMITH: And at that time we were
21 unaware that there was even a 20 mil standard and
22 so on. Because we do a lot of international
23 business, but yet we are only in sections of the
24 country. But we were wanting to, you know,
25 obviously come this direction.

1 And also knowing that, like was
2 mentioned before, what starts out here on the west
3 coast probably will be picked up and swept across
4 the nation, picked up by a lot of other companies.

5 PRESIDING MEMBER PFANNENSTIEL: So I
6 assume then, Mr. Pennington, Ms. Hebert, this is
7 essentially new information in terms of
8 consideration of the standards?

9 MR. PENNINGTON: No. Most of this
10 energy-related information is determined through
11 the rating procedure for reflectance and
12 emittance, and is what we focus on in giving
13 credit within the building standards.

14 So most of this -- his product may show
15 up better through the process that we've set up in
16 the building standards. He's showing evidence
17 that it performs better than other white coatings.
18 So, if that's really true, then that should show
19 up readily in the process that we've established.

20 So the only issue that he's questioning
21 really is the 10 mil thickness versus the 20 mil
22 thickness, which most of this doesn't relate to
23 directly. Although he did make a couple of
24 statements that were --

25 MR. SMITH: Right. What I was trying to

1 come to the point of is that because of having the
2 ability to not be able to hold the heat, that it
3 basically does not maintain the heat in the
4 coating, that it -- I'm not going to say is
5 impervious, but is --

6 MR. PENNINGTON: So let me ask you, --

7 MR. SMITH: -- is very resistant to
8 weathering.

9 MR. PENNINGTON: -- what is unique about
10 your product that is different from other high
11 reflectants, high emittance products that causes
12 it to hold the heat less than other competing
13 products?

14 MR. SMITH: Well, I think there's a lot
15 of different things, as far as the size and shape
16 of the ceramics. We use four different type of
17 ceramics. Two of them are reflective, and are cut
18 in a specific way to be able to more or less kick
19 off the rays.

20 Another is a nonconductor. I know that
21 a lot of companies, even though I feel like 3M is
22 a good company, a lot of companies boast of using
23 3M silicate beads. Basically that's glass. Glass
24 is not a good -- I mean, I'm sorry, it's a very
25 good conductor of heat. You want something that's

1 a nonconductor or a very poor conductor of heat.

2 So what we do is we use something
3 different in the type of a hollow sphere. That's
4 another thing.

5 One of the -- the fourth ceramic that we
6 use is something which we've had tested, which,
7 you know, like I say, I've got all this testing
8 right here if you'd like to have it -- that also
9 blocks 99.5 percent of infrared. And as we know,
10 that infrared plays a tremendous role in blocking
11 out heat going into the building and the allowance
12 of incidental heat to start.

13 So along with that, even though that's a
14 performance characteristic, one of the things that
15 we do is that we have a certain type of blends of
16 resins, urethanes and acrylics; and also that we
17 also have -- even though we buy more or less top-
18 of-the-line, very highly rated resin system, but
19 yet we even actually add into it resin additives
20 that are built or designed to double the life of
21 any other resin in the system, also.

22 We originally started in the oil fields
23 in the petroleum industry down in Columbia in
24 South America. That's where we originated. And
25 that's the way the coatings were built, was for

1 that type of caustic environment.

2 So to be able to go on top of, you know,
3 a rooftop or -- is not that large of a challenge
4 for us, as compared to where we've been.

5 MR. PENNINGTON: So my understanding is
6 that ASTM standards that have been set for a wide
7 range of products have mil requirements of 20
8 mils, or generally higher. Is that incorrect?

9 MR. SMITH: Well, now I'm not sure on
10 that. I think there are certain standards, it's
11 jut like in insulation standards, they require to
12 be able to get an R value you have to be one inch.
13 Okay. That's their thoughts on it.

14 Well, we know, by our testing, that
15 there's certain things that we can do that we
16 perform better. But yet can you plug it into that
17 formula? No, you can't do that, you know. And
18 I'm not going to pretend to know all the ASTM
19 rules, but I do know that if there are certain
20 standards that are required by ASTM, that's what
21 we follow, you know, in our testings.

22 PRESIDING MEMBER PFANNENSTIEL: Mr.
23 Pennington, do you think you have enough
24 information to --

25 MR. PENNINGTON: Yeah, I'd like --

1 PRESIDING MEMBER PFANNENSTIEL: --

2 consider the request, I think, that's in front of
3 us.

4 MR. PENNINGTON: Yeah, I'm curious about
5 what other manufacturers would say --

6 MR. SMITH: What I was going to also
7 mention was just the last testing there that was
8 done in China for us, was a 2000-hour salt bog
9 test, a 2000-hour manual aging test, a 1000-hour
10 salt water. And then also the very last one is
11 that they actually immersed it in boiling water
12 and it didn't develop any bubbles until after
13 eight hours.

14 And that, I think, tends to prove a
15 pretty durable coating.

16 But basically, and I won't take up any
17 more of your time, but basically what we'd like to
18 ask is that basically that we don't -- that we
19 aren't barred from going in and using our product
20 and especially not be able to give, you know,
21 California or any of the other states the benefit
22 of what we've got to offer, you know.

23 From another angle, too, is obviously
24 since we are used to, and one of the questions
25 somebody said about the other coatings companies,

1 is that we're not near in the price range at what
2 these other coatings are, either. We are a higher
3 priced coating.

4 Well, anytime, doesn't matter whether
5 it's a Rolex watch or what you're buying, you're
6 going to pay for quality.

7 But I guess my point is that if you were
8 to require a 20 mil thickness, that would really
9 put us out of the ballpark as far as doing the job
10 to meet that requirement. Because we'd have to
11 basically have double the labor, double the
12 product and so on.

13 PRESIDING MEMBER PFANNENSTIEL: Thank
14 you.

15 MR. SMITH: So, and I think that we have
16 a lot to be able to offer.

17 PRESIDING MEMBER PFANNENSTIEL: Thank
18 you, Mr. Smith.

19 MR. SMITH: Um-hum.

20 PRESIDING MEMBER PFANNENSTIEL: Thank
21 you for the excellent information, also. We'll
22 consider that.

23 MR. SMITH: Thank you. Would you like
24 to have this testing?

25 MR. PENNINGTON: Sure.

1 PRESIDING MEMBER PFANNENSTIEL: Also on
2 this item we have Craig Lease from L&L Suppliers.

3 MR. SMITH: Are you finished with me?

4 (Laughter.)

5 PRESIDING MEMBER PFANNENSTIEL: Yes,
6 thank you.

7 MR. SMITH: Okay.

8 MR. LEASE: Am I on here?

9 MS. HEBERT: Um-hum.

10 MR. LEASE: Yes, I'm Craig Lease with
11 L&L Suppliers, Incorporated, Stockton, California.

12 And I believe I'm the only manufacturer
13 listed in all of title 24 energy requirements or
14 requirements that I have a mil thickness for every
15 substrate, including metal, including capsheet,
16 including our tar-and-gravel system. And I have
17 developed a capsheet -- not a capsheet, another
18 system for composition shingles that I've now
19 tested for nine years in Bullhead City, Arizona
20 and Phoenix, Arizona. And I'm ready to bring that
21 product to market.

22 I would like to actually add some specs.
23 I have a 30 mil spec for my capsheet system; I
24 would like to add a 20 mil system for my capsheet
25 roofing.

1 I also have a 200 mil thickness,
2 quarter-inch is 250 mils. I have a 200 mil system
3 using quarter-inch rock, so that fills up the rock
4 about 80 percent with our white cement coating.

5 I'd like to add a 100 mil system for the
6 gravel, which would not be quarter-inch gravel; it
7 would be eighth-inch gravel.

8 So essentially I'd like to add two mil
9 thicknesses to my stats, 20 mils for capsheet and
10 100 mils for the tar-and-gravel systems.

11 I do have -- I might as well show you
12 now, I have a 43-year-old sample of a roof, and I
13 have a 45-year-old sample of a roof that were both
14 done with the eighth quarter-inch rock.

15 You have to excuse me; my public
16 speaking is not perfect. Excuse me for a second.

17 This is our very first cool roof we ever
18 did. It used to be white. But it is literally
19 installed in 1960 as a base, three-ply, tar-and-
20 gravel. And we installed it in 1960. We first
21 heard of cool roofs in 1958 and actually started
22 installing in 1960.

23 This roof was installed in 1962. It's
24 been recoated three or four times on a ten-year
25 basis. I have two testing labs are sending me the

1 results of this asphalt that has now been on the
2 roof for 43 years and still performing. They did
3 want to put insulation over this roof, or anywhere
4 in their building. The couldn't do it on the
5 inside of the structure, so we recommended they
6 put two inches of polyurethane foam with two coats
7 of acrylic over the top of that.

8 So I'll have the test results back on
9 the durability of this roof and how much roof life
10 is still left in this, because it is still
11 flexible. This is the bay sheet right here. It's
12 very flexible. There's really nothing wrong with
13 this roof. The biggest problem we ever had with
14 this roof was trying to explain why it lasted so
15 long to the owners, because they kept asking us,
16 do we need a new roof over and over and over. And
17 we kept telling them, we asked them, does it leak.
18 They said no. We said then you do not need a new
19 roof.

20 So, I'd like to add our two specs and
21 thank you very much.

22 PRESIDING MEMBER PFANNENSTIEL: Thank
23 you very much for your comments.

24 COMMISSIONER ROSENFELD: I have a
25 question for both of you. I don't understand the

1 problem. The question here was for a minimum
2 thickness, and Mr. Lease is asking to add thicker.
3 So, --

4 MR. LEASE: Actually, 30 mils on
5 capsheet, and I'd like to also have a spec of 20
6 mils on capsheet.

7 MR. PENNINGTON: I think his comments
8 are not directly related to the comments from
9 Superior. But there is an exception for the kind
10 of product that he makes that has, as he says,
11 different mil thicknesses depending on the
12 substrate.

13 And he's suggesting beefing that up,
14 which is a little bit different than what you're
15 hearing in general at this hearing.

16 MR. LEASE: I'm required at this point
17 to have a 30 mil thickness, and I would like to
18 have it -- we've done tons of 20 mil thickness and
19 even less. So I'd like to have a 20 mil spec for
20 capsheet roofing as a base to apply on capsheet.
21 So.

22 COMMISSIONER ROSENFELD: And that's
23 currently required to be 30?

24 MR. LEASE: Right.

25 COMMISSIONER ROSENFELD: Oh, okay. All

1 right. At least I understand the problem.

2 MS. HEBERT: So one question I would
3 have is are there other products out there like
4 yours, and would those manufacturers agree with
5 what you're suggesting?

6 MR. LEASE: There's only two other
7 manufacturers that I've ever even heard of. Bill,
8 you have the -- you said there's original email
9 from National Coatings that talked about two other
10 white cement coatings and the testing that they
11 were required, or that they had.

12 MR. PENNINGTON: I don't recall those
13 manufacturers.

14 MR. LEASE: Okay. Yeah, that was like
15 November of --

16 MR. PENNINGTON: Yeah, we're talking
17 four years ago, or something like that.

18 MR. LEASE: Well, yeah, at least a
19 couple years.

20 MR. PENNINGTON: Yeah.

21 MR. LEASE: So, yeah, there was two
22 other white cement coatings. There's only, that I
23 know of specifically, I can get on the phone,
24 there's one in Arizona and I've heard there's one
25 in Florida. Just talked to a Florida solar

1 gentleman back at the Cool Roof Symposium and he
2 said there was one in Florida. So that could mean
3 there's three of us in the whole country. And
4 that's why there is no particularly ASTM regs or
5 standards for white cement coatings, because
6 there's only three of us.

7 Thank you.

8 PRESIDING MEMBER PFANNENSTIEL: Thank
9 you. Now, also on this subject, Paul Beemer from
10 Henry Company, would like to speak.

11 MR. BEEMER: Thank you. Henry Company
12 does have a position on this. We support
13 Superior's proposal to eliminate the minimum mil
14 thickness.

15 I believe you've heard people state that
16 the application, the technology will have
17 different mil thicknesses that are appropriate to
18 the technology. And we agree with that.

19 The coating technology you have in the
20 substrate you're trying to go onto will affect
21 what is an appropriate amount of coating to put
22 down.

23 People, for some reason, tend to
24 denigrate housepaint. Housepaint is certainly not
25 a roof coating. But high-end, exterior housepaint

1 is maybe 35 percent, by volume, solids. It goes
2 down at 300 square feet to the gallon, which means
3 your dry film thickness is about 2 mils.

4 A south- and west-facing house in Palm
5 Springs will see far more UV, far more and more
6 extreme temperature cycles than say a flat roof in
7 San Francisco. Obviously it won't face ponding
8 water, which is a real challenge, but looking at
9 housepaint, which is generally considered
10 inferior, 2 mils lasts a long, long time.

11 There's no magic coating thickness.

12 PRESIDING MEMBER PFANNENSTIEL: Thank
13 you.

14 MR. PENNINGTON: I think there's a
15 perception that we don't want housepaints for cool
16 roof coatings. Partially because they don't last
17 very long. There's a need to repaint frequently.
18 I suppose if you're --

19 MR. BEEMER: If you used a product --

20 MR. PENNINGTON: -- at the very high end
21 of all the housepaints you might find some
22 exceptions to that.

23 MR. BEEMER: I'm not suggesting that you
24 should use a product that was designed to paint a
25 wall to paint a roof, because I agree you're going

1 to be in for a sad surprise.

2 MR. PENNINGTON: Um-hum.

3 MR. BEEMER: But that being said, the
4 common degradation factors for an acrylic coating,
5 UV exposure, temperature cycling, they manage to
6 get by on that particular substrate for a long
7 time with only 2 mils.

8 I'm not suggesting that it would work on
9 a roof. In fact, I will state categorically that
10 it would be a fluke if it worked on a roof,
11 because what you have to do to work on a roof is
12 totally different from what you have to do on a
13 side on a building.

14 But, durability, per se, is not
15 correlated to thickness. Whatever your technology
16 is, whatever your substrate is, there will be an
17 appropriate minimum below which you will get
18 poorer performance. But that magic number just
19 plain doesn't apply to all conceivable roofs, all
20 conceivable roof coating technologies. There is
21 not a magic number.

22 MS. HEBERT: So your suggestion for our
23 regulation would be what?

24 MR. BEEMER: I would suggest that we
25 accept the cool roof rating program. If it's not

1 rated by CRRC it shouldn't be up there. That the
2 field-applied coatings be, in fact, applied at
3 whatever thickness was done when the samples for
4 the CRRC testing were made. And for that coating,
5 that is its minimum thickness requirement.

6 That way your age data will be
7 correlated to what you can expect as well as, you
8 know, a small sample test can correlate.

9 But however the person put it down to
10 support his CRRC rating should be -- the label
11 instructions should be consistent with what they
12 did to get the CRRC numbers.

13 MR. PENNINGTON: So let me ask you about
14 your proposal for a second. Do you submit to CRRC
15 samples of area substrate that might be imaginable
16 that you would use your coating --

17 MR. BEEMER: I lost that battle in CRRC.

18 MR. PENNINGTON: So you only do it for
19 one, some sort of standard --

20 MR. BEEMER: CRRC mandates a single
21 substrate.

22 MR. PENNINGTON: So I'm not sure how
23 your proposal --

24 MR. BEEMER: Does not mandate coating
25 thickness.

1 MR. PENNINGTON: I'm not sure how your
2 proposal relates to your comments.

3 MR. BEEMER: I propose that it be
4 applied at the coating thickness that was done to
5 support the CRRC testing, for whatever that was.

6 MS. HEBERT: No matter what the
7 substrate?

8 MR. BEEMER: A reputable manufacturer
9 will probably have different application
10 instructions for different substrates. I don't
11 think that an external third party can mandate
12 more correctly than that.

13 MS. HEBERT: Is there a comment from the
14 audience? You have to come up to the microphone,
15 please.

16 MR. MELLOTT: Do I have to reintroduce
17 myself?

18 PRESIDING MEMBER PFANNENSTIEL: Yes,
19 please, for the record.

20 MR. MELLOTT: Okay, Joe Mellott,
21 Momentum Technologies. Paul, I understand where
22 they're coming from because the goal, all of us
23 agree, I think, somewhat to the goal. We don't
24 want to put housepaints on roofs; we don't want
25 people putting a product down that's going to wear

1 away in a year. I think we all agree to that.

2 By going with the manufacture-applied
3 standard to the CRRC, being a CRRC test lab, that
4 wouldn't matter. You could still submit it to the
5 CRRC and they would enjoy a window of about three
6 years of opportunity to go ahead and attack the
7 market with housepaint and paint roofs if we don't
8 have some type of performance standard in place.

9 I do also agree with Paul, however, that
10 we need to have some type of manufactured minimum
11 to put down. I don't think that the California
12 Energy Commission should be prescribing how much
13 material should be put down. The manufacturer who
14 is going to write the warranty needs to provide
15 that information to the consumer.

16 What we're trying to do is set up a
17 system that keeps bad products, nonperforming
18 products, from entering the marketplace. That
19 will also, at the same time, allow performing
20 products to enter the marketplace.

21 And we all have this general fear that
22 here comes paint on the roof. And I think that,
23 you know, as a CRRC lab, we would get the panel;
24 we'd run the reflectance and emissivity; off it
25 would go to the test farm; and it wouldn't matter

1 if it was housepaint or peanut butter. It's going
2 to get a number, and we're not going to know for
3 three years whether or not it's going to perform
4 or not.

5 So people would be able to get around
6 it, Paul, and --

7 MR. BEEMER: I don't think there's any
8 indication at all that anyone is trying to do
9 that.

10 MR. MELLOTT: Well, there is no
11 indication, but that doesn't mean that when
12 there's a marketplace in play that people could
13 enjoy, you know, a government-instituted program
14 to make roofs reflective. If I'm a building owner
15 and I'm trying to save money on my building, and I
16 can just go out and buy a bucket of Glidden and
17 slap it on the roof, versus use a roof coating,
18 and get around the California Energy standard, I
19 may do that.

20 MR. BEEMER: But Glidden isn't getting
21 the CRRC rating on their housepaint.

22 MR. PENNINGTON: They could.

23 MR. MELLOTT: Well, because they haven't
24 doesn't mean they won't.

25 PRESIDING MEMBER PFANNENSTIEL: Other

1 comments --

2 MR. BEEMER: They get the warranty.

3 PRESIDING MEMBER PFANNENSTIEL: -- from
4 others in the audience on this subject? Please
5 come up and introduce yourself again at the mike.

6 MR. PEPPER: I will keep to this
7 subject, too.

8 I think we're getting off the --

9 PRESIDING MEMBER PFANNENSTIEL: Please
10 introduce yourself, again, for the record.

11 MR. PEPPER: Oh, I'm sorry, Stan Pepper,
12 Greenproducts, previously up here.

13 And I think the mil thickness issue,
14 while Superior Products is down to 10 mils dry,
15 and while ours is 30, dries to 27, is immaterial.
16 But the performance factors are the key issue
17 here.

18 And arbitrarily setting it at 20 mils or
19 10 mils, or reducing it to 10, I think new
20 technology coming down the road not far from now,
21 with space age technologies and other things,
22 we're going to find less mil thicknesses and
23 better performances because of the ceramics and
24 other things that are being brought into the
25 marketplace.

1 So, if you keep your requirements at 20
2 mils, you're going to eliminate innovative
3 products coming to marketplace. And Bill's
4 comment about, not to get back to housepaints, our
5 product is very expensive, also, like Superior's.
6 It's a high-end performing product. And if your
7 specs generically keep everything in the middle,
8 you're going to take away the opportunity.

9 And mil thickness goes along with that.
10 I don't think that the California Energy
11 Commission should be concerned about that. It
12 doesn't guarantee performance.

13 Thank you.

14 PRESIDING MEMBER PFANNENSTIEL: Thank
15 you. There's another comment?

16 MR. SALAZAR: Yes, Chris Salazar from
17 Karnak Corporation. I agree with Paul that a 20
18 mil thickness is not going to prevent the bad
19 coating from going on the roof. Because like Joe
20 mentioned, you can get a CRRC rating of paint,
21 then apply at 20 mils, and in effect end up with a
22 bad roof.

23 So I think that, like Paul said, a
24 reputable manufacturer will have tested their
25 products. And there are certain things you can't

1 protect the consumer regardless. There are people
2 that are going to find a way around whatever
3 regulations are there, to put products that are
4 not suited for the substrates that are available
5 in California.

6 So, I think that the thickness is not
7 going to prevent, if that's what you're putting
8 into prevent, paints from going on the roof, it's
9 not going to achieve the desired effect. Because
10 people are going to put paint on at 20 mils thick.

11 PRESIDING MEMBER PFANNENSTIEL: Thank
12 you, Mr. Salazar. Commissioner Rosenfeld, you had
13 a question?

14 COMMISSIONER ROSENFELD: I guess I can
15 see a world in which there is a minimum thickness
16 like 20 mils, but a manufacturer who submits a 15
17 mil product to CRRC and it passes a three-year
18 test, or a six-year test or whatever seems
19 appropriate, could apply for a waiver. But it
20 will be after aging testing, so that there
21 wouldn't be this issue of slapping some temporary
22 solution on the roof.

23 Bill, can you --

24 MR. PENNINGTON: The CRRC testing is a
25 three-year test; and its testing was the

1 reflectance at the end of that period, and what's
2 the emittance impact at the end of that period.

3 It's not looking at other physical
4 properties of the roof, and what's the status of
5 that specimen vis-a-vis these other physical
6 properties.

7 So it's only looking at the reflect --
8 it's how much dirt is sticking on the roof,
9 basically; and how much is it discoloring.

10 COMMISSIONER ROSENFELD: So you --
11 sorry. You're worried that the product could be
12 badly degraded and still get a cert. Bill Kirn, I
13 think, was --

14 MR. KIRN: Yes, just a followup to the
15 test method. The coatings are typically applied
16 according to CRRC protocol to an aluminum panel
17 allowed to dry and put out on exposure. So that's
18 the state or substrate for all this.

19 But I did have a question for Mr. Smith
20 about his product. I looked in the documentation
21 he sent in, and it says -- and we see a lot of
22 before-and-after where the after coating shows
23 dramatically reduced air conditioning energy
24 costs. And yet I look at the before pictures and
25 these are quite often dark-colored metal roofs

1 that would tend to absorb a lot of infrared
2 radiation.

3 So I'm not quite sure where the control
4 experiment is for that.

5 MR. PEPPER: I think he left.

6 PRESIDING MEMBER PFANNENSTIEL: Yeah, I
7 think he's not here.

8 MR. KIRN: Oh, okay. And I was also
9 just wondering, where people talk about insulative
10 coatings, this is just maybe, just some comments
11 if he's not here, to talk about insulative
12 coatings.

13 And I wonder what is the CRRC listing.
14 If a product has got some enhanced performance it
15 should have very high reflectance and very low
16 emissivity. If it is an insulator, a true thermal
17 barrier insulator, it would have an R value. And
18 I don't know what that R value would be.

19 And yet if you're putting on 10 mils --
20 typically R value is R per inch, so you buy three
21 inches of fiberglass insulation, you know, it's R-
22 13 or something it's listed as.

23 But we're here talking about 10 mils,
24 which is one-one hundredth of that inch value. So
25 the R value associated with 10 mils of coating,

1 the true insulative properties have got to be
2 incredibly low. I don't know what that number
3 would be, but I have a bit of skepticism here.

4 (Parties speaking simultaneously.)

5 PRESIDING MEMBER PFANNENSTIEL: It won't
6 help if people talk in the audience. If you want
7 to speak, please come up and get recognized.

8 DR. AKBARI: Sorry, Commissioner. My
9 name is Hashem Akbari. I was recently Japan, you
10 know, actually I had to comment exactly on this
11 issue.

12 The manufacturer just provided approval
13 sheet to me and it does rate an R value for the
14 product at the level of 250 micron, which is 100
15 mil, to be equal .015 in metric unit, watt per
16 meter, per -- so once you do the calculations, you
17 would find out that the R value is equivalent to
18 .001. Such a very small value.

19 And, of course, once it is compared with
20 the other products that are out there, the R value
21 of the others may be ten times smaller than that
22 .001. But, you know, both of them are approaching
23 zero. That would be one comment that I would like
24 to make.

25 The other comment that I would like to

1 make is that -- yes, Commissioner.

2 COMMISSIONER ROSENFELD: There's been a
3 flow of numbers. Kirn says he's skeptical of
4 significant R for small layers, and you're just
5 trying to back that up? That --

6 DR. AKBARI: That's exactly what I said.

7 COMMISSIONER ROSENFELD: -- even an
8 enthusiast doesn't claim --

9 DR. AKBARI: That is correct.

10 COMMISSIONER ROSENFELD: Okay.

11 DR. AKBARI: That is exactly correct,
12 so --

13 COMMISSIONER ROSENFELD: Just trying to
14 make it clear.

15 DR. AKBARI: -- the number is very very
16 close to zero.

17 PRESIDING MEMBER PFANNENSTIEL: Thank
18 you.

19 DR. AKBARI: It may be, you know, ten
20 times or a hundred times more larger than metal
21 for the same thickness, but both of them are
22 approaching zero.

23 The other comment that I would make is
24 that most of this cool coatings are white. And at
25 the levels of 10 micron or 10 mils and lower, you

1 would find a significant amount of both visible
2 and near-infrared light would go through, and that
3 would substantially reduce the amount of the solar
4 reflectance of that product.

5 So, from the optical properties alone,
6 there got to be some minimum requirement for the
7 thickness. And that's what we are hoping that the
8 CRRC would capture in their performance and
9 labeling of the products.

10 And --

11 MR. PENNINGTON: Hashem, could I ask you
12 a question?

13 DR. AKBARI: Please.

14 MR. PENNINGTON: How would -- I didn't
15 think the CRRC was labeling their thickness.

16 DR. AKBARI: The CRRC is not labeling
17 thickness, but CRRC is labeling R value -- or, no,
18 pardon me, the reflectance of the material when it
19 is being applied. When it is being applied,
20 according to the manufacturer's specification.

21 And as Paul mentioned, unfortunately
22 CRRC, to a certain extent, is also manufacturer --
23 institution, and they wanted to try to put
24 everything on a metal base. And we know that most
25 of these coatings, when they're applied in the

1 field, would actually apply to a dark base.

2 And those who were smart knowing that in
3 the CRRC suggested to do it on a metal base, a
4 metal base to be shiny on the background would
5 somehow bias to give more credit to the coatings
6 than what they are actually in the field.

7 So, solar reflectance reported by CRRC,
8 read the manufacturer's specific level of
9 thickness being rated at .8, may in the field
10 actually be performing lower than that.

11 MR. PENNINGTON: So, what I'm not
12 understanding is the CRRC, does it say anything
13 about what the manufacturer should be -- what
14 thickness the manufacturer should be installing
15 this at on a substrate that's different than the
16 specimen?

17 DR. AKBARI: The answer is no, they
18 would only require it would be according to the
19 manufacturer's specification.

20 For instance, if they specify that a
21 gallon of this product should go over 200 square
22 feet. That would translate to a certain wet and
23 dry thickness. And that would be the thickness
24 that they would apply on the samples and subjected
25 to the testing.

1 MS. HEBERT: Does CRRC verify that
2 thickness when the sample comes to the lab?

3 DR. AKBARI: No, there is no answer to
4 that.

5 MR. PENNINGTON: So this substrate
6 that's being tested by the CRRC is one of the
7 easiest surfaces to coat, right?

8 DR. AKBARI: That is correct.

9 MR. PENNINGTON: And requiring one of
10 the least thick coatings? I mean, it's not like
11 trying to go over some asphalt membrane or
12 something like that where you need, you know, a
13 lot more.

14 It seems like you're -- if you based it
15 on the thickness that was used for that specimen,
16 you would be at the low end of the range of
17 thickness that would apply to all substrates for
18 the coating.

19 DR. AKBARI: Most probably that's
20 correct.

21 MR. PENNINGTON: So I'm a little worried
22 about that idea.

23 PRESIDING MEMBER PFANNENSTIEL: I'm
24 going to, I think, given the time, we have a lot
25 of information on this subject. I'm going to move

1 on to the next item on the agenda, but I will, at
2 the end, once we have concluded that, offer people
3 an opportunity to come back with further comments
4 on this or anything else that we've heard today.

5 So, thank you.

6 DR. AKBARI: Thank you.

7 PRESIDING MEMBER PFANNENSTIEL: And I'd
8 like to move on to the item 3c, which has to do
9 with exception 2. And I believe Mr. Mellott
10 wanted to speak to that first.

11 MR. MELLOTT: We'd like to waive comment
12 on that.

13 PRESIDING MEMBER PFANNENSTIEL: Fine. I
14 also have reference that Mr. Lease would like to
15 address this item.

16 MR. LEASE: Thank you. When I last came
17 in and spoke in front of the Commission --

18 PRESIDING MEMBER PFANNENSTIEL: I'm
19 sorry, Mr. Lease, you should identify yourself
20 again for the record.

21 MR. LEASE: I'm sorry. Yes, Craig
22 Lease, L&L Suppliers, Incorporated, Stockton,
23 California. We manufacture white cement roof
24 coatings and soon acrylics and others.

25 When I was -- I called up to get my D822

1 testing accomplished, and I called up PRI Asphalt
2 in Tampa, Florida, to do the test. He essentially
3 told me -- this is over a month ago -- that that
4 was how you ran the machine, and this is the
5 procedures of running the test, not the test,
6 itself.

7 And to this point I'm still not exactly
8 sure. Elaine Hebert sent me out a complete list.
9 There's probably 20 different materials on there
10 from lacquers to different paints to different
11 coatings; nothing specifically that says white
12 cement coating.

13 And as of last Friday I've hired
14 Monumentum (sic) Technologies --

15 UNIDENTIFIED SPEAKER: Momentum
16 Technologies --

17 MR. LEASE: Excuse me, -- around later -
18 - I've hired a new testing lab, Momentum
19 Technologies, can't even say it right, to let me
20 know exactly what has to be done. Because I've
21 waited a month for testing to come back on the
22 same piece of roofing. I was told it was going to
23 be in this afternoon, which is great.

24 And so I just need a specific what I
25 need to do to either have this testing changed,

1 and/or pass what testing is relevant to my
2 coating.

3 So I will definitely get back to you
4 guys with my new testing lab.

5 PRESIDING MEMBER PFANNENSTIEL: I
6 appreciate that, thank you.

7 MR. LEASE: Thank you very much.

8 PRESIDING MEMBER PFANNENSTIEL: I would
9 like now, I think that there's an opportunity to
10 either get additional comments on any of the items
11 that we've already covered, or if there's some new
12 areas that are important for the Committee to
13 consider in recommending a decision to the full
14 Commission on this. Now would be the time.

15 I see that Mr. Mellott would like to
16 speak to this, so why don't you begin, please.

17 MR. MELLOTT: Joe Mellott, Monumentum,
18 Momentum Technologies.

19 (Laughter.)

20 COMMISSIONER ROSENFELD: Nice new name.

21 MR. MELLOTT: Just a brief question for
22 the Commission. We're discussing a new test
23 method potentially in table 118-C. As a test
24 laboratory I was told I was kind of cutting my
25 nose off to spite my face in this trip, because if

1 there's new methods that means there's new
2 testing, and I potentially would enjoy new
3 business, although I've argued strongly against
4 table 118-C.

5 I do have one question, however. Is
6 there going to be third-party verification for
7 these tests? It was odd that at one point in time
8 someone said, well, we'll just have to change our
9 datasheets. Well, that may be all it requires if
10 there's not third-party verification for these
11 results.

12 You have new methods. All it would take
13 would be for an un reputable manufacturer to just
14 go ahead and change the numbers and say, well, we
15 meet table 118-C. There's no verification
16 whatsoever. Is there an intention to use the CRRC
17 as a backbone for that testing? Is there no
18 intention to provide third-party verification? Is
19 it self-certified? Where do you intend to go?

20 MR. PENNINGTON: There is no third-party
21 requirement for this testing, just as there is no
22 such requirement for other building code uses of
23 ASTM tests.

24 MR. MELLOTT: Well, in many cases there
25 are.

1 MR. PENNINGTON: Well, I would agree
2 with you, it varies.

3 MR. MELLOTT: Right, it's done on a
4 local basis here in California from what we
5 understand.

6 MR. PENNINGTON: I'm not --

7 MR. MELLOTT: And there are certainly
8 more experts on that in the room on how they deal
9 with third-party verification for the results, but
10 I think starting a program with self-certification
11 with a new methodology --

12 MR. PENNINGTON: Usually we try to go to
13 third party, or we consider going to third party
14 if there's a demonstrated problem that the testing
15 results are not, you know, if there's
16 misrepresentation of test results by the
17 manufacturers.

18 MR. MELLOTT: How would you establish
19 that?

20 MR. PENNINGTON: That sort -- usually
21 through complaints is usually how it's identified.
22 So usually we don't start out by going to third-
23 party testing.

24 MR. MELLOTT: Okay, because, you know,
25 as a representative of many people that have used

1 my test lab, you know, if they know their product
2 is going to perform in its application, and
3 there's no necessity for third-party testing, we
4 may suggest to them that just try it and see what
5 happens, you know.

6 I'm just trying to be honest. I mean,
7 why go through the rigors or testing to 118-C if
8 there's no necessity for third-party verification
9 and you think your product's going to work anyway,
10 go ahead. And if nobody complains, off you go.

11 And, you know, the way it's structured
12 now, that's probably what we would suggest, rather
13 than try to have someone spend money.

14 PRESIDING MEMBER PFANNENSTIEL: Thank
15 you, that's interesting information. Others who
16 would like to speak, as I said, on either further
17 comments on discussions that we've already -- that
18 have already been introduced, or new subjects on
19 this general area?

20 Yes, please.

21 MR. PICKETT: My name's Matt Pickett.
22 I'm with GAF Materials Corporation. We're also
23 active members with RCMA. I've just got a couple
24 of general comments, not specific to any of the
25 particular items, but maybe somewhat to kind of

1 clarify for myself more than anything else, you
2 know, what the issues are here today.

3 In general I'm in support of the RCMA
4 comments that we've heard so far. A lot of the
5 other manufacturers made very valid points, as
6 well.

7 One of the things that strikes me that
8 may be the cause of a lot of the confusion we
9 have, is that we're trying to do something with
10 roof coatings that hasn't been done with other
11 types of roofing materials. You know, for very
12 good reasons we haven't said performance
13 requirements for EPDM should be the same as for
14 TPO or for hot asphaltic roofing because, you
15 know, there couldn't be a one-size-fits-all for
16 those types of materials because they're different
17 chemically.

18 And we've had a lot of discussion today
19 about why one-size-fits-all might not work for
20 roof coatings for the same reason, different
21 chemistries are available that may need different
22 thicknesses, different performance requirements.

23 If we add to that fact that roof
24 coatings are, in general, put over another
25 substrate, which again can be very varied from a

1 very flat surface, such as metal, to a very rough
2 surface, such as an old degraded asphalt roofing,
3 then trying to pick a single coating performance
4 requirement or single thickness requirement that
5 would meet all those individual substrate concerns
6 would be tough.

7 And as a manufacturer of roof coatings
8 we, you know, that's something we've grappled with
9 on a daily basis. And for that very reason we
10 have a number of different formulations for
11 different substrates, and we have different
12 specifications based on the condition of those
13 substrates and what the expectations in terms of
14 performance are.

15 And so, another thing that occurs to me
16 is that we've also confused some of the different
17 requirements that we might want a roof coating to
18 do. For very many years a roof coating was, in
19 general, put onto the roof to help protect it,
20 extend its life, perhaps rescue its performance in
21 terms of water-proofing integrity. And
22 reflectivity energy savings were somewhat
23 secondary, until quite recently, weren't even
24 recognized.

25 So, in what we're trying to achieve with

1 roof coatings in specific, we're trying to combine
2 those two performance requirements, extending the
3 roof life, rescuing or maintaining the roof
4 performance from a water-proofing point of view,
5 and also combining that energy efficiency
6 requirements.

7 And I think what I'd like to encourage
8 the group to do, as we move forward with these
9 types of specifications, is to try and separate
10 those two things as much as possible.

11 And if it's energy conservancy and
12 energy efficiency that we're trying to specify,
13 then focus on that. And when we're talking about
14 durability for energy conservancy, focus on
15 durability as it relates to energy efficiency and
16 not some of the other less-hard-to-manage -- less-
17 easy-to-manage performance requirements that might
18 be better served with specific requirements in
19 other parts of the building code or other ASTM
20 standards that relate to specific substrates,
21 specific projects or specific technologies.

22 I guess I'm encouraged by everything
23 I've heard today. I think this is a very valiant
24 effort. And as a manufacturer, we will be
25 committed to help with ongoing efforts to the 2008

1 standards, working either through the individual
2 work groups or through the RCMA input.

3 But I think those are the sort of things
4 that I think we should be considering as we move
5 forward.

6 PRESIDING MEMBER PFANNENSTIEL: Thank
7 you, Mr. Pickett. Those are useful insights.

8 MR. PICKETT: Thank you.

9 MS. HEBERT: Please make sure you've
10 signed our sign-in sheet with an email address so
11 that we may keep you informed of the 2008 process.
12 And that goes for anybody who wants to be part of
13 that.

14 PRESIDING MEMBER PFANNENSTIEL: Bill or
15 Elaine, additional comments?

16 MR. PENNINGTON: Some comments related
17 to next steps, perhaps. I don't know if you're
18 asking for that?

19 PRESIDING MEMBER PFANNENSTIEL:
20 Certainly.

21 MR. PENNINGTON: There was a proposed
22 adoption hearing in the notice of proposed action
23 for June 22nd. That date was on the expectation
24 that we would be considering adopting the 45-day
25 language of the express terms that's there. That

1 seems quite unlikely that we'll be doing that.

2 So, I suspect that we would be putting
3 out 15-day language. And this adoption date would
4 just be a quick informational, here's the status
5 for the Commission. And we would be continuing
6 that hearing to consider the 15-day language.

7 PRESIDING MEMBER PFANNENSTIEL: So the
8 staff will bring a recommendation to the Committee
9 on that?

10 MR. PENNINGTON: Right. So, that's just
11 sort of a heads-up that I suspect June 22nd is a
12 nonevent for people. And, you know, have to
13 travel across the country that --

14 COMMISSIONER ROSENFELD: Don't buy your
15 plane tickets yet, right.

16 MR. PENNINGTON: Yeah.

17 PRESIDING MEMBER PFANNENSTIEL:
18 Commissioner Rosenfeld, any additional comments?

19 COMMISSIONER ROSENFELD: No, thanks.

20 PRESIDING MEMBER PFANNENSTIEL: I want
21 to thank everybody here. I want to thank Mr. Kirn
22 for his contributions. I think they were valuable
23 to us as we move forward.

24 But I think all of the participants here
25 brought a lot of information, some of which was

1 new to us, some of which just I think was in a
2 useful context for us.

3 We have an additional comment.

4 MR. HITCHCOCK: I'm sorry. Reed
5 Hitchcock with the Roof Coatings Manufacturers
6 Association. The members of the RCMA, the one
7 thing that they asked me to address at the end is
8 just any comments or anything that come through
9 related to changes in the language, we just wanted
10 to go on the record asking to be included in the
11 dissemination of those comments.

12 PRESIDING MEMBER PFANNENSTIEL:
13 Absolutely.

14 MR. HITCHCOCK: Thank you.

15 PRESIDING MEMBER PFANNENSTIEL: We'll
16 make sure that happens.

17 So, thank you, all. Excellent
18 participation, good workshop, and you'll hear from
19 us all again.

20 The workshop will be adjourned.

21 (Whereupon, at 12:20 p.m., the hearing
22 was adjourned.)

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